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1988 Update: AIDS in Correctional Facilities

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James K. Stewart
Director
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U.S. Department of Justice
Office of Justice Programs
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1988 Update: AIDS in Correctional Facilities

by
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with assistance from
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Issues and Practices in Criminal Justice is a publication series of the National Institute of Justice. Designed for the criminal justice professional, each *Issues and Practices* report presents the program options and management issues in a topic area, based on a review of research and evaluation finding, operational experience, and expert opinion on the subject. The intent is to provide criminal justice managers and administrators with the information to make informed choices in planning, implementing and improving programs and practice.

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Foreword

The managers and staff of correctional institutions were among the first criminal justice professionals to confront the problem of AIDS. Time has not diminished that challenge. By October 1988, a cumulative total of 3,136 confirmed AIDS cases (the vast majority the result of intravenous drug use) had been reported among inmates in the nation's prisons and its largest jails – an increase of 309 percent over the first survey of inmate AIDS cases in 1985. However, that staggering increase is still less than the 407 percent increase in confirmed AIDS cases among the general population during the same time period. Correctional administrators thus continue to face tough decisions about institutional management, the best and most equitable means of identifying and treating inmates with AIDS, potential legal issues, and the costs of medical care. Policymakers and corrections officials cannot afford to wait until medical science produces an ultimate answer. To address the problem effectively today, they need the most accurate and up-to-date information available.

In late 1985, the National Institute of Justice (NIJ) began its first study of AIDS in prisons and jails and has, since then, annually surveyed and reported on the prevalence and institutional management of AIDS within the federal and state prison systems as well as in the nation's largest jails. Over 24,000 copies of the first, second, and third editions have been distributed on request to date. This report updates the third edition of *AIDS in Correctional Facilities: Issues and Options* published in 1988. These studies could not have been completed without the cooperation and assistance of numerous professionals in the fields of corrections and medicine.

This report is but one part of NIJ's ongoing effort to assist correctional administrators and other criminal justice professionals in meeting the challenge of AIDS. NIJ's *AIDS and the Law Enforcement Officer: Concerns and Policy Responses*, examines AIDS-related policies, training programs, and appropriate precautionary measures in the context for current medical knowledge and the day-to-day realities of law enforcement. NIJ's *AIDS in Probation and Parole* examines the issues which AIDS raises for community corrections.

In mid-1987, the Institute also established the NIJ AIDS Clearinghouse to provide a centralized national source of information about how AIDS affects criminal justice professionals and their work. Within the first two months of operation, the Clearinghouse, (301) 251-5500, received over 700 calls and requests from federal, state, and local criminal justice agencies. The Clearinghouse gathers and disseminates AIDS-related information developed by NIJ, the Centers for Disease Control, other agencies of the U.S. Public Health Service, and the Department of Justice, as well as selected materials prepared by professional organizations, state and local governments, and criminal justice agencies throughout the U.S. As part of the Clearinghouse, NIJ instituted a new publication series, *AIDS Bulletins* – short, nontechnical summaries of AIDS-related topics for criminal justice practitioners.

The HIV epidemic places enormous stress on already overburdened correctional systems. Current and accurate information can place corrections officials in a stronger position to address the problem of AIDS, provide sound education and training, ensure equitable delivery of services, and develop reasoned and effective management policies. Correctional administrators and managers have already done much to meet the challenge of AIDS. The National Institute of Justice hopes that this update will be of assistance in their continued efforts.

James K. Stewart
Director
National Institute of Justice

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Finally, this project could not have been completed without the cooperation of several hundred correctional administrators, correctional medical directors, correctional legal counsel, physicians, researchers, and others who responded to our questionnaires, answered our followup questions, and provided other invaluable information. They were unfailingly gracious and patient.

Theodore M. Hammett
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Introduction

AIDS continues to be an extremely serious public health problem in the United States and around the world. The disease also continues to pose major social, moral, ethical, and philosophical issues for those who must formulate personal and public policy responses to it. There is nothing easy in the response to AIDS, and yet how we respond is critically important to our society. As Harvey Fineberg, Dean of the Harvard School of Public Health, recently wrote,

> [t]he AIDS epidemic exposes hidden vulnerabilities in the human condition that are both biological and social. AIDS prompts courageous and generous acts, and it provokes mean-spirited and irrational responses. AIDS throws new light on traditional questions of value, compels a fresh look at the performance of the institutions we depend on and brings society to a crossroads for collective action that may, with the passage of years, mark a key measure of our time.[1]

Prisons and jails are squarely in the public eye as they attempt to deal with the difficult issues posed by AIDS. Correctional administrators must address many of the same issues faced by public health and other government officials beyond the walls – education, testing, confidentiality, prevention of transmission – as well as others not as central to the response on the outside – segregated housing, rape, and other violent victimization.

Because of the range of difficult AIDS-related issues with which they must deal, it is crucial that correctional officials be armed with the most accurate and current information available as a foundation for reasonable policy decisions. Since 1985, the National Institute of Justice (NIJ) has attempted to respond to this need by providing correctional administrators and policymakers with factual and up-to-date information on AIDS.

This document updates research developments on AIDS and reports on the fourth annual NIJ survey of correctional systems. Again, we received responses from all fifty state departments of correction and the Federal Bureau of Prisons, as well as from all twelve Canadian correctional systems.

Thirty-seven questionnaires were sent to large city and county jail systems in the United States, and 28 responses were received (76%).[2] This represents a slightly lower response rate for the city and county systems than we achieved in previous years. However, the responses received continue to represent a good sampling of the largest city and county jail systems in the United States. Data presented in this report are current as of October-December 1988.

The report is organized into the following sections: 1) Biomedical and epidemiologic research developments; 2) Epidemiology of HIV infection and AIDS in correctional facilities and the population at large; 3) Tuberculosis and HIV infection; 4) Developing AIDS-related policies in corrections; 5) Education and training; 6) HIV antibody screening and testing; 7) Housing and correctional management policies; 8) Medical care and psycho-social services; 9) Precautionary measures; 10) Confidentiality and notification issues; 11) Legal and labor relations developments; and 12) Legislative developments.

1: Biomedical and Epidemiologic Research Developments

In 1988, the Institute of Medicine of the National Academy of Sciences issued an update of its 1986 volume *Confronting AIDS*.[3] These are extremely comprehensive and well-written reports on AIDS-related issues and research. The 1988 update concludes that great progress has been made in defining the genetic structure of the human immunodeficiency virus (HIV) and understanding its replication in laboratory culture (*in vitro*). Less well understood are the replication of the virus in the living animal (*in vivo*) and its interaction with the host.[4] This section summarizes the latest biomedical and epidemiologic research regarding the virus and its transmission, the natural history of infection as well as prospects for vaccines and therapeutic drugs.

The Structure and Replication of HIV

The genetic structure of HIV is extremely complex and changeable. It is composed of at least nine genes. Scientists believe that the complexity of the virus underlies its ability to remain dormant for long periods and then suddenly burst into replicative activity. This pattern, in turn, may "hold the key to the pathology of AIDS."[5]

In the past several years, a great deal of research attention regarding the replication of HIV has focused on two proteins: the gp120 protein on the viral "envelope" and the CD4 "receptor" on the surface of the T4 and macrophage blood cells which are the targets of the virus. Robert Redfield and Donald Burke provide a good summary description of the action of HIV.

> Infection begins as . . . [the] . . . gp120 [of the virus] binds tightly to [the] CD4 receptor [of the target cell]. The virus then merges with the . . . cell and transcribes its RNA genome into double-strand DNA [through the viral reverse transcriptase].

The viral DNA becomes incorporated into the genetic material of the cell's nucleus and directs the production of new viral RNA and viral proteins which combine to form new virus particles. These particles bud from the cell membrane and infect other cells.[6]

Because the gp120-CD4 interaction is so crucial to the virus's ability to infect healthy cells and replicate, it is the focus of a significant portion of the effort to develop vaccines and therapies for HIV infection.

HIV-2

The virus we typically refer to as HIV in the United States is actually HIV-1, so named to distinguish it from the more-recently discovered HIV-2. HIV-2 is most prevalent in west Africa, whereas HIV-1 predominates in the central African areas where the AIDS epidemic has reached its most devastating stage thus far. Although less is known about the natural history of infection with HIV-2, it is clear that at least some HIV-2-infected persons develop AIDS.[7]

HIV-2 is a close relative (50% genetically related) of simian immunodeficiency virus (SIV) macaque, which asymptomatically infects a substantial percentage of African green monkeys and causes a simian form of AIDS in Asian macaques. Some scientists believe that HIV-2 is an intermediate form between SIV and HIV-1. It is speculated that the Asian monkeys may have been accidentally exposed to African green monkeys in a holding facility. While the African monkeys may have, over a long period of time, evolved mechanisms to prevent the infection from progressing to disease, the Asian monkeys were being exposed for the first time and had developed no such defenses. Thus, it may be that it is species most recently exposed which are most susceptible to serious viral illness, while species exposed longer ago have developed mechanisms to resist the progression to active disease.[8]

HIV-2 is believed to be extremely rare in the United States thus far, although it is also true that HIV-2 is less well detected than HIV-1 by the available antibody tests.[9]

Natural History of HIV Infection

In the past year, some important revisions have occurred in our understanding of the natural history of HIV infection. Most important has been the realization that HIV infection itself, not just AIDS, constitutes the epidemic disease. The Presidential Commission studying the epidemic was named the commission on the HIV epidemic and its report strongly stated that "the term 'AIDS' is obsolete. 'HIV infection' more correctly defines the problem. The medical, public health, political, and community leadership must focus on the full course of HIV infection rather than concentrating on later stages of the disease (ARC [AIDS-Related Complex] and AIDS)."[10]

The Institute of Medicine also concluded that terms such as ARC and PGL [Persistent Generalized Lymphadenopathy] are "no longer useful" in diagnosis or prognosis. It is more accurate to describe patients' conditions in terms of their specific symptoms and laboratory evidence of immune dysfunction.[11]

In general, scientists now view HIV infection as a continuum of disease from asymptomatic infection to end-stage AIDS. Robert Redfield and his colleagues at the Walter Reed Army Hospital have developed a six-stage view of HIV infection which demonstrates a "predictable progressive derangement of immune function" based primarily on the progressive infection and destruction of T4 cells. AIDS is the last of the six stages and it should still be diagnosed based on the presence of opportunistic diseases. Redfield contends that Kaposi's sarcoma (KS) should no longer be included as an opportunistic disease for AIDS because it is not related to immune deficiency and can therefore appear at an early stage of infection. It is true that progression of KS and progression of immune suppression are apparently uncorrelated in many patients. However, KS still kills HIV-infected people and is therefore retained in the case definition of AIDS.[12]

The Walter Reed classification has been criticized based on recent research findings that substantial numbers of asymptomatically infected individuals cannot be accommodated within its stages. Moreover, this research suggests, CD4 cell counts may be better predictors of disease progression than a patient's Walter Reed classification stage.[13]

However one conceptualizes the stages of infection, the timing and pace of progression from one stage to the next depend on a range of factors not yet well understood regarding the virus itself (and the particular strain infecting the particular individual) and the characteristics of the host. Scientists believe that the two principal types of cells attacked by HIV (T4 cells and macrophages) may be infected at different paces. There may be an initial burst of replication in T4 cells (which accounts for the symptoms often seen soon after infection occurs), followed by a long latent period. In the macrophages, by contrast, HIV may replicate at a slower, steadier pace. This replicative behavior, of course, varies not only across cell types but across viral strains and individual hosts as well. Scientists believe that "an elaborate set of genetic controls" in the virus itself determines whether and how fast the cycle of replication will occur. The genes which make up the virus constantly interact to set the level of viral growth. In addition, a variety of co-factors (host characteristics rendering an individual more or less susceptible to active HIV-related illness) are still under study and no firm conclusions have yet been reached.[14]

Evidence continues to accumulate that virtually everyone infected with the virus will, sooner or later, progress to active disease. In the longest-studied cohort of infected individuals, about 50 percent have developed clinical AIDS and another 35 percent have developed other HIV-related illness after 10 years of followup. One mathematical model suggests that 100 percent of the cohort will ultimately develop AIDS, although other models suggest that some infected people may be spared.[15]

While the incubation period of active HIV disease varies notably from individual to individual, the most recent estimates indicate that the mean incubation period is about eight years.[16] Of course, these estimates may lengthen as cohorts are studied for ever longer periods. The point, however, remains clear. The long incubation period of HIV disease presents very serious problems for bringing the epidemic under control, because at any point in time the patterns of active disease represent infection patterns that were occurring at least several years earlier.

HIV and the Brain

It has been known for some time that HIV directly infects the brain and causes a range of central-nervous-system disorders, including a form of dementia. Researchers are now describing in greater detail how and when this occurs. Scientists believe that since macrophages, one of the cell types infected by HIV, are able to cross the blood-brain barrier, they are most likely responsible for HIV-related dementia.[17]

In addition, researchers are discovering that AIDS dementia generally occurs late in the progress of infection and is accompanied by other symptoms. Neurological symptoms are unlikely to develop suddenly or independently. This knowledge has important implications for employment policies. The clinical evidence does not justify HIV antibody testing of job applicants and exclusion of seropositives from employment.[18]

HIV Testing

There have been several developments in testing technology involving both antibody tests and other types of HIV tests. A so-called "five-minute" antibody test has been approved by the U.S. Food and Drug Administration for use by selected hospitals and physicians. While the test could be self-administered by the patient or administered by others, its limited approval is due to concerns that it is difficult to read (especially for lay

persons), that it may be administered without consent (e.g. by emergency medical technicians and other first responders at accident scenes), and that it may be used without provision of appropriate counseling.

The test, called Recombigen HIV-1, is the first genetically engineered recombinant protein test to be approved by the FDA. The test is performed using whole blood (as opposed to serum, as in other available antibody tests) from a fingerprick. Seropositivity is indicated by "clumping" or agglutination between HIV antibodies in the blood and a special protein derived from a hybrid HIV-1 gene combining the viral components most productive of antibody response. However, this clumping may not be visible without special lighting or magnification.[19]

Another "home" antibody test is simply designed to enable individuals to draw their own blood, which then must be sent to a laboratory for analysis. This procedure offers an additional confidentiality protection in that the person need not appear at a testing facility. However, the FDA provisionally denied licensure of this kit based on concerns about its safety and the quality of counseling that would be provided by the laboratories performing the tests and informing subjects of their results.[20]

The debate over the accuracy of the available antibody tests – principally, the ELISA and Western Blot tests – continues. Recent evidence from the Centers for Disease Control (CDC) and the U.S. armed forces' testing program indicate that the tests are highly accurate, even in low-prevalence populations, if performed with strict standardization and stringent quality control.[21] However, lack of standardization and quality control may still lead to test accuracy problems, particularly excessive false positives, in populations with low true prevalences of HIV infection.

Other types of HIV tests are designed to avoid some of the pitfalls of antibody testing. These include the Polymerase Chain Reaction (PCR) approach and HIV antigen tests. The PCR technology amplifies DNA gene sequences, thus permitting direct detection of HIV even when it is latent or inactive. This potentially eliminates the problem of the "window period" in antibody testing as well as making it possible to diagnose HIV infection in infants with much greater accuracy. PCR testing has been used to show that several patients who "seroreverted" from positive to negative on antibody tests were still latently infected with HIV.[22] At this time, however, PCR should be viewed as a research technique, not yet suitable for clinical use.

HIV antigen tests, which detect part of the virus itself rather than antibodies to the virus, are in widespread use in research, but not yet licensed for diagnostic use because the significance of a positive antigen test is not yet clear. Antigen is usually detected early in infection (when the antibody test is still negative) or late in the course of disease. Antigen tests are most often negative between these two times. As a result of the uncertainty regarding their interpretation, antigen tests are not likely to be widely used for screening purposes. Rather, their principal use will probably be as a marker of viral activity to inform decisions regarding efficacy of various treatment strategies.

Prospects for Vaccines

In its 1988 update of *Confronting AIDS*, the Institute of Medicine concludes that vaccine development "continues to pose fundamental difficulties" and that "we are no closer now to having a licensed vaccine against HIV than we were 2 years ago." A number of vaccines are under development and several have been approved for clinical trials in the United States and Europe. However, none of the vaccines under testing has as yet been able to prevent infection in primates or humans. The candidate vaccines have produced increased antibody levels, but there has been no correlation between these elevated antibody levels and the progress of natural infection. The virus has clearly "evolved a way to coexist with the immune response of the host."[23]

There are a number of explanations for the difficulties encountered in vaccine development. First, the virus appears to be able to hide (almost in "Trojan horse" fashion) in cells, change the composition of its coat, and install its own genes within the genes of the host. All of these mechanisms may protect HIV from effective attack by vaccines. Second, an individual may be infected by more than one strain of the virus, so that while a vaccine attacks one strain, the other is able to continue replicating and infecting cells. Third, a vaccine's activation of helper T cells in the body's normal immune response to HIV may actually stimulate HIV replication and cell death. Additionally, a vaccine may stimulate the production of antibodies that enhance HIV infection of helper T cells. Thus, according to Redfield and Burke, "the very process that should defeat HIV . . . has the diabolical effect of increasing the proliferation of the virus." Fourth, a vaccine against HIV may have to block infection totally, rather than simply blocking active illness, as most other successful vaccines do. This is because of the possibility of direct cell-to-cell transmission which could not be blocked except by an immune response which successfully eradicated the virus. Researchers hope that there is some humanly tolerable level of HIV infection so that they need not confront the

daunting necessity of totally blocking infection, which is not reasonable to expect from any vaccine.[24]

In addition to the obstacles posed by the virus itself, there are several other serious problems affecting scientific attempts to develop vaccines. First, the lack of a good (and readily available) animal model of HIV infection in humans has hindered work on both vaccines and therapeutic drugs. Second, there are serious problems of scientific uncertainty (e.g., does the absence of infection reflect the action of the vaccine or the subject's own risk reduction behavior?) and ethics (e.g., can any potentially effective vaccine or therapy be appropriately withheld for research purposes from anyone at risk?) surrounding clinical trials and it will likely be difficult to enroll sufficient volunteers. Indeed, in view of the array of problems already encountered, the Institute of Medicine has recommended that clinical trials of vaccines in humans be delayed until significant new advances have been made or until a candidate vaccine is demonstrated to be effective in primates.[25]

Prospects for Therapeutic Drugs

On the subject of therapeutic drugs for HIV infection, the Institute of Medicine finds "cause for cautious optimism." However, the Institute's report emphasizes that therapies depend on early detection of infection and early treatment to be maximally effective. There are numerous drugs now available – a few legally and many others illegally – or under development that may have some inhibitory effect on the progression of infection at various stages of HIV's life cycle from the binding of the gp120 "envelope protein" and the CD4 cell receptor to the budding of newly replicated viral particles. Other drugs are aimed at preventing or controlling opportunistic diseases associated with HIV infection.[26] However, it remains true that there is no cure for HIV infection. No drug available to date has been able to eradicate the infection or restore the immune system. The best that has been achieved thus far is the retardation of the process of infection and disease.

The most promising areas of research on therapeutic drugs are inhibition of reverse transcriptase (the viral component essential to the reverse coding of genetic information from RNA to DNA – thus the term "retrovirus") and other anti-viral interventions such as inhibition of the gp120-CD4 interaction. The most noteworthy reverse transcriptase inhibitor is zidovudine (also known as azidothymidine or AZT). Clinical trials have now clearly shown that AZT slows the progress of HIV infection and prolongs life in many patients with severe disease manifestations.[27]

Clinical trials on the efficacy of AZT in asymptomatic individuals have been in progress for some time, but results are not yet available. Several sites have continued to have serious difficulties enrolling volunteers in the trials, in part because a significant number of physicians are now reportedly prescribing AZT to asymptomatically infected patients, despite the fact that the drug has not been approved for this purpose by the FDA.[28]

However, AZT's serious side effects and considerable cost continue to raise concern. Of even more serious concern is the recent discovery of AZT-resistant strains of HIV. This raises the possibility that AZT may only be able to retard the progression of HIV disease for a relatively short period. One strategy for combatting viral resistance and reducing side effects is to alternate doses of AZT with other drugs. One combination under study is AZT and another reverse transcriptase inhibitor called ddC (2',3'-dideoxycytidine). Recent research indicates that ddC is able to retard viral replication in some patients, but that it has potentially serious side effects. The alternating regimen of AZT and ddC is a promising approach because the side effects of the two drugs are very different. Other combinations of drugs are also being tried.[29]

A notable anti-viral intervention is soluble CD4, exogenously added fragments of the receptor CD4 protein to which the viral envelope protein must bind to begin the process of HIV replication. The idea is to "trick" the gp120 of the virus into binding to these non-cell-related fragments of CD4, thus neutralizing the infectivity of the virus and sparing the cells. Recent research shows that CD4 has been effective in inhibiting HIV replication and virus-induced cell fusion in rhesus monkeys infected with Simian Immunodeficiency Virus (SIV) Macaque. Because of the close relationship between SIV macaque and HIV-1, these infected monkeys provide an excellent model for evaluation of potential therapies. There are several potential problems with soluble CD4, however. First, the substance may be unable to cross the blood-brain barrier to inhibit infection in the central nervous system. Second, the large doses of soluble CD4 necessary to divert the viral gp120 may interfere with other cell function and independently exacerbate immune deficiency rather than reversing it.[30]

Prophylaxis and treatments for various opportunistic diseases are also receiving considerable attention. Aerosolized pentamidine received FDA approval in February 1989. It is being widely used to prevent appearance or recurrence of *Pneumocystis carinii* pneumonia (PCP) in HIV-infected patients. Clinicians are finding the drug more effective and less toxic when delivered directly to the lung through a nebulizer than when in-

jected. Trimextrate, another drug used to treat PCP, has been granted "investigational new drug" (IND) status under new FDA regulations. This means that it may be sold at cost only (no profit is allowed) for treatment purposes. Trimextrate was the first AIDS-related drug to be approved under these regulations.[31]

Recent research on AIDS patients (and other immunocompromised individuals) with herpes simplex virus (HSV) and cytomegalovirus (CMV) disease raise serious concerns about the long-term efficacy of currently available treatments for these opportunistic infections. Scientists have discovered strains of HSV and CMV that are resistant to acyclovir and ganciclovir, respectively. A number of patients have died when their infections became resistant to these drugs. Some scientists fear that HIV itself may develop drug-resistant strains. Ironically, it is possible that as the prognoses of HIV-infected individuals improves under anti-HIV treatment, more drug-resistant pathogens will emerge to threaten their life-expectancy. These research findings, together with the discovery of AZT-resistant strains of HIV, only serve to underscore the importance of aggressive development of alternative therapies.[32]

Drug Approval and Clinical Trials

There has been a great deal of controversy surrounding the time-consuming FDA approval process for vaccines and drugs. In particular, persons with HIV infection and AIDS advocacy groups have complained that people were dying while the government tied up promising new drugs in cumbersome and seemingly endless trials and bureaucratic approvals. In response to these criticisms, the FDA has streamlined the process and created the new category of investigational new drugs mentioned above. These drugs can be distributed and made available to patients before the full approval process has been completed.[33]

At the same time, scientists continue to point to the absolute necessity of well-designed clinical trials. The Institute of Medicine concludes that poorly designed studies produce results that are of no value in measuring efficacy and "distribution of untested drugs makes it impossible to determine whether or not they are effective .... The end result ... could include the continued prescribing of useless or harmful therapies."[34]

The conflict between the need for speeded access to drugs and the need for rigorous trials to assess the efficacy of drugs is one of the ethical dilemmas posed by the HIV epidemic. Researchers recommend that, to minimize the problems associated with clinical trials, they enroll the smallest possible number of subjects that can produce statistically significant results and broaden the geographical and demographic base to include hitherto underrepresented groups such as women and intravenous drug users.[35]

Transmission of HIV

The modes of HIV transmission – sexual intercourse, blood-to-blood contact, and perinatal events – are clear and well documented. There have been no developments indicating that this picture will change. Indeed, the Institute of Medicine reports that "[a] change in HIV transmission modes would be biologically unprecedented in a virus. There is no evidence that HIV is capable of such a change."[36]

Substantial suspicion regarding possible new transmission modes has focused on the AIDS patients in the CDC registry with "no identified risk." Of course, it is important to understand at the outset that most of the individuals in this category died before they could be interviewed, refused to be interviewed, or were otherwise lost to followup. A recent intensive effort to obtain risk factor information on individuals in this group succeeded in reclassifying a significant number into existing transmission modes and failed to find evidence for any new modes of transmission.[37]

If the modes of transmission are clear, the relative efficiency of transmission associated with the specific behaviors and incidents composing each mode are less clear.[38] In addition, there is continued uncertainty as to the relative infectiousness of symptomatic persons and those without symptoms.[39] Of course, asymptomatically infected persons are still infectious.

Sexual transmission has been most common among homosexual men, although heterosexual transmission has clearly been established. A possible case of female-to-male transmission through oral-genital sex has recently been reported. This is the first reported case attributed exclusively to oral sex. The infected individual, a 60-year-old male with diabetes and HIV-related dementia reported no high risk behavior other than a two-year relationship with a female prostitute with whom he engaged in oral sex only. The man stated that he had no contact with the prostitute's blood and had no oral or genital ulcers at the time of his encounters with the prostitute. The report must be treated with caution, however, because of the man's mental incapacities and because the infection status of the prostitute was not determined. Finally, there have been one and possibly two cases of female-to-female transmission through traumatic sexual practices. It is expected, however, that this will continue to be an extremely rare occurrence.[40]

Blood-to-blood transmission has occurred primarily through sharing of needles and works by intravenous (IV) drug users and through transfusions of infected blood and provision of infected blood preparations to hemophiliacs. The latter two modes have been virtually eliminated by the universal screening of donated blood and heat treatment of clotting factor concentrates. However, between March 1985 (when blood screening began) and October 1987, there were 13 cases of HIV infection in recipients of blood donated by persons testing negative at the time of their donations. These donors had been infected too close to the time of their donations for detectable antibodies to have appeared. Thus, a very small number of HIV-infected units are slipping through the elaborate screening process that has been established. It has been estimated that in the United States only 1 of 40,000 to 50,000 donated units is infected but goes undetected.[41]

Of particular concern to corrections and law enforcement personnel has been the possibility of infection through needlesticks and other blood-to-blood or blood-to-mucous-membrane exposure. There have been only 14 well-documented cases of on-the-job infection of health care workers, including nurses, medical technicians, laboratory technicians and dentists. A number of these cases involved individuals who had failed to follow established precautionary procedures. Moreover, based on several large prospective studies of health care workers suffering needlestick, other blood-to-blood and mucous-membrane exposures to patients known to be HIV-infected, the risk of infection in such exposures is less than one percent. Studies have also shown that the risk to dentists and dental personnel is extremely low.[42]

Perinatal transmission is about 30-50 percent efficient, although perhaps higher for infants born of symptomatic mothers. However, the results are complicated by the fact that some infants born of infected mothers display maternal antibodies which may be falsely indicative of their own infection. It may take 12-15 months or more for these maternal antibodies to clear so that test results will actually reflect the presence or absence of the child's own antibodies. Further complicating diagnosis is the fact that, after maternal antibodies clear, an infected infant may not mount an independent antibody response for some time.[43]

Other modes of transmission continue to be discredited by research findings. Ongoing studies of more than 500 family and household members of AIDS patients reveal no cases of infection through casual, non-sexual contact. Similarly, there continues to be no evidence for transmission by insects or in normal occupational or social settings.[44]

Finally, there is still *no evidence of HIV transmission through biting or exchange of saliva*. In a CDC study, not one of 48 health care workers seroconverted after skin or mucous-membrane exposure to saliva from HIV-infected patients. One previous report of possible transmission between siblings by a bite was discounted when further investigation determined that the bite had not broken the skin. A report of transmission through mouth-to-mouth contact is now discounted because the individual, although initially reported to be culture positive, has remained seronegative and repeated subsequent efforts to culture the virus from her have failed.[45]

As a result of the strong evidence against transmission of HIV through certain body fluids, CDC has recently revised its guidelines for "universal precautions" in health care settings. Previously these guidelines were to apply to all body fluids. However, CDC has now limited their application to blood, other body fluids containing visible blood, tissues, semen, vaginal secretions, and several other less commonly encountered fluids. Universal precautions are no longer recommended for saliva, sputum, vomitus, nasal secretions, sweat, tears, urine, or feces, unless they contain visible blood.[46]

2. Epidemiology of HIV Infection and AIDS in Correctional Facilities and the Population at Large

HIV Infection and AIDS in the Population at Large

AIDS cases in the United States appear to be following quite closely the projections made by the CDC in 1986. Although the rate of increase in AIDS cases is slightly slower in 1988 than it was earlier in the decade, the numbers continue to grow alarmingly. As of January 1, 1989, there had been almost 83,000 cases of AIDS reported to CDC, including over 1300 pediatric cases. Officials at CDC believe that their reporting system captures about 90 percent of the cases meeting the surveillance definition, which was significantly expanded in 1987. By January 1, 1989, over 46,000 persons had died of AIDS in the United States. The Public Health Service (PHS) estimates that by the end of 1992, there will have been 365,000 AIDS cases diagnosed and 263,000 cumulative deaths. During 1992 alone, according to PHS, there will be 80,000 new diagnoses and 65,000 people will die of AIDS in the United States.[47]

In Canada, 2,253 adult cases and 39 pediatric cases had been reported as of December 28, 1988. There had been 1,245 known deaths.[48]

New York State and California together account for 45 percent of AIDS cases in the United States, although this is down several percentage points from last year, indicating a greater diffusion of the epidemic. New Jersey, Florida, and Texas contribute another 22 percent of total cases, up one percentage point from 1987.

The Public Health Service has reduced slightly its original estimate of the number of asymptomatically infected individuals in the United States. In 1986, it was estimated that 1-1.5 million Americans were infected. The PHS offers this same range as a reasonable estimate of infection in 1988.[49] This reduction was based on new seroprevalence data and size estimates for several key groups of the population. Overall seroprevalence in the population is unknown. Numerous subpopulation studies are under way and a national household seroprevalence study is under discussion.

In the meantime, the closest substitute for national seroprevalence data are figures from first-time blood donors (0.04% in the period April 1985-May 1987, adjusted for the age, sex, racial, and ethnic composition of the U.S. population) and applicants for military service (0.12% in the period October 1987-March 1988, down from 0.15% in the period October 1985-March 1986). However, these rates are believed to be underestimates of the seroprevalence in the total population because persons at high risk of infection are underrepresented through self-selection.[50]

The racial and ethnic breakdown of AIDS cases in the United States has remained fairly stable, although the historic overrepresentation of blacks and Hispanics is becoming more pronounced. For example, in 1987, 60 percent of cumulative total cases had been among whites, 25 percent among blacks, and 14 percent among Hispanics. By the end of 1988, the percentages were 58, 26, and 15, respectively. This reflects a shift in the fastest-growing component of the epidemic from gay white males to black and Hispanic IV drug users, their sexual partners, and children. In general, blacks and Hispanics will be increasingly over-represented among AIDS cases as the epidemic proceeds.

The CDC breakdown of cumulative total AIDS cases by transmission categories as of January 1, 1989 is shown in Figure 1. Notably, there has been a three-percent shift in cases from the homosexual/bisexual male category to the IV drug abuser category: in December 1987, the respective percentages for these groups were 65 percent and 17 percent; in December 1988, they were 62 percent and 20 percent. Cumulative total cases among gay men increased by 54 percent during this year, as opposed to an 86 percent increase among IV drug users. CDC believes that there has been a shift, but attributes some of it to the change in the case definition of AIDS that produced greater increases in IV drug use-associated cases than in gay male cases. Heterosexual cases maintained the same 4 percent *share* of the total between 1987 and 1988, but the *absolute number* of heterosexual cases increased by 77 percent during that interval.[51]

Clearly, the face of the epidemic in the United States is changing. The growth in new cases of AIDS is slowing among gay populations in some parts of the country, as is incidence of HIV infection. This may be attributable to saturation or to behavior change or some combination of the two. The sharpest increases in AIDS cases in the past two years have been among IV drug users, their sexual partners and children. In New York City, 1988 is the first year of the epidemic in which new cases among IV drug users outnumbered new cases among gay men. Moreover, there may be many more unreported cases of HIV-related disease among IV users in New York

Figure 1

BREAKDOWN OF ADULT/ADOLESCENT AIDS CASES IN THE U.S. BY TRANSMISSION CATEGORY

Transmission Category	Number of Cases	Percent of All Cases
Homosexual/Bisexual Male	50,325	62%
Intravenous (IV) Drug Abuser	16,151	20
Homosexual Male and IV Drug Abuser	5,874	7
Hemophiliac	773	1
Heterosexual Cases	3,589	4
Transfusion Recipients	2,044	3
Undetermined	2,662[a]	3
Total	81,418	100%

[a] These individuals are thought to have had known risk factors, but information on these factors was not available for various reasons – e.g., they died before they could be interviewed, they refused to be interviewed, or they had forgotten or failed to admit high-risk behaviors.

Source: CDC, AIDS Weekly Surveillance Report - United States, January 2, 1989.

and other cities, based on a study showing that many deaths officially attributed to narcotics are also linked to HIV infection.[52]

Perinatal AIDS has increased sharply in the past year – by over 75 percent between December 1987 and December 1988. Almost 80 percent of pediatric cases are attributed to perinatal transmission with at least one parent at risk of HIV infection. These are overwhelmingly the children of IV drug users or their sexual partners. Almost 80 percent of them are black or Hispanic. Many live their entire lives in hospitals, abandoned by parents who are generally unable to care for them due to their own illness or drug addiction.

The likelihood of large-scale spread of HIV into the non-IV drug using heterosexual population continues to be downplayed by most observers. However, public health officials warn against complacency, since the possibility of heterosexual transmission is clearly established and rapid spread could occur where there is a sufficient reservoir of infected people to initiate and sustain a "chain of transmission." These circumstances currently seem most likely to exist among IV drug users and their sexual partners, and IV-drug using prostitutes.

Indeed, heterosexual transmission thus far has been almost entirely limited to sexual partners of persons with histories of high-risk behavior – primarily IV drug users. There has been little or no tertiary transmission – i.e., transmission in which neither partner has established risk factors for HIV infection. In short, there is not a general epidemic of HIV infection in the United States. Instead, there is really a series of smaller, overlapping epidemics – for example, homosexual men, IV drug users, and sexual partners of IV drug users – each with its own dynamic, history, and projected course.[53]

HIV Infection and AIDS in Correctional Facilities

No Job-Related Cases of HIV Infection or AIDS Among Correctional Officers. Four successive NIJ surveys of correctional systems have found no cases of HIV infection or AIDS in correctional staff that could be linked to an on-the-job incident. In this year's survey, two systems listed job-related cases but, upon further investigation, neither case was at all persuasive. The first case occurred in the Maricopa County (Phoenix, Arizona) jail, where an officer claimed that an HIV-positive inmate spat in his face. Six weeks later, the officer tested positive. He had not been tested at the time of the incident to determine his baseline antibody status. Moreover, the incident itself posed at best an extremely remote risk of infection. As a result, a board composed of medical specialists, county attorneys, and a representative of the industrial commission determined that the infection was not job-related.

The second case involved a Philadelphia County correctional officer who claimed to have been infected on the job. Details are extremely sketchy. Apparently, the officer was only tested once, and not by the prisons'

Figure 2

CUMULATIVE TOTAL AIDS CASES AMONG U.S. CORRECTIONAL INMATES AND THE U.S. POPULATION AT LARGE, 1985-1988

	November 1985	October 1986	Percent Increase 1985-86	October 1987	Percent Increase 1986-87	October 1988	Percent Increase 1987-88
Correctional Cases	766	1,232	61%	1,964	59%	3,136[b]	60%
Cases in Population at Large[a]	14,519	26,002	79	41,770	61	73,621	76

[a] Adult/adolescent cases. Pediatric cases excluded.

[b] City/county jail systems reporting in 1987 but not reporting in 1988 were Baltimore City (Maryland), Wayne (Detroit, Michigan), Westchester (New York), Harris (Houston, Texas), Ventura (California), and Orange (California). These jurisdictions reported having had a total of 45 cases as of 1987.

Source: CDC, AIDS Weekly Surveillance Reports - U.S., November 4, 1985, October 6, 1986, October 5, 1987, October 3, 1988; NIJ Questionnaire Responses.

occupational health services. He has since left the employ of the correctional system without submitting a written claim. Therefore, this is not considered a *bona fide* case of job-related infection.

AIDS Cases Among Correctional Inmates As of October 1, 1988, there had been a cumulative total of 3,136 confirmed AIDS cases among inmates in 70 responding federal, state, and local correctional systems in the United States (Figure 2). There had been 2,047 cases in 44 state and federal systems. Twenty-six city and county systems reported 1,089 cases. These figures require several qualifications. First, there may be some double counting of cases between state and local correctional systems, as county inmates often move on to state institutions after conviction. This may mean that the total figures are overstated. Second, as shown in Figure 2, the list of responding city/county systems has changed slightly from year to year. For example, seven systems that responded in 1987 failed to respond in 1988, while one 1988 respondent had not participated in 1987. However, the numbers of cases reported from these variably participating jurisdictions are not large enough to change the overall picture in any significant way.

Total cases in responding U.S. correctional systems increased by 60 percent between October 1987 and October 1988. As Figure 2 shows, the rate of increase in total correctional cases has remained constant since 1985. Moreover, this rate of increase continued to be slower than that seen in the total U.S. population – 76 percent between October 1987 and October 1988. The jump in the rate of increase in total AIDS cases in the U.S. population between 1986-1987 and 1987-1988 – from 61 percent to 76 percent – is at least partially attributable to the expansion of the CDC surveillance definition of AIDS in August 1987. Fully fourteen percent of the total cases reported to CDC as of October 3, 1988 met only the revised case definition.

In Canada, the federal correctional system reported a cumulative total of three AIDS cases, up only one from 1987, while provincial systems reported 31 cases, up well over 100 percent from 1987.

The figures above are cumulative totals – that is, they represent all cases reported since the correctional systems began keeping records. As of October 1, 1988, 44 state and federal systems in the United States reported 445 current inmate AIDS cases (432 males and 13 females), while 26 city/county systems reported 192 current cases (172 males and 20 females). Canadian systems had 7 current cases (5 males and 2 females).

State and federal systems in the United States report that a cumulative total of 1,088 inmates (1,051 males and 37 females) had died of AIDS while in custody. Responding city and county jail systems reported 220 AIDS deaths (207 males and 13 females). About one-third of all inmate AIDS deaths in the United States have occurred since the 1987 survey was taken. Canadian systems report six AIDS deaths, three of which occurred since the 1987 survey was taken.

In some correctional systems, AIDS has come to account for a significant proportion of all mortalities. In New York state, for example, almost 60 percent of deaths among correctional inmates in 1987 and 1988 were the result of AIDS.[54]

Figure 3

DISTRIBUTION OF CUMULATIVE TOTAL AIDS CASES AMONG INMATES, BY TYPE OF SYSTEM, UNITED STATES

State/Federal Prison Systems

Range of Total AIDS Cases	November 1985				October 1988			
	n systems	%	n cases	%	n systems	%	n cases	%
0	26	51%	0	0%	7	14%	0	0%
1-3	15	29	24	5	8	16	13	1
4-10	5	10	30	7	18	35	118	6
11-25	2	4	42	9	6	12	107	5
26-50	1	2	33	7	5	10	155	8
51-100	1	2	95	21	2	4	138	7
>100	1	2	231	51	5	10	1,516	74
Total	51	100%	455	100%	51	101[a]%	2,047	101%[a]

City/County Jail Systems

Range of Total AIDS Cases	November 1985				October 1988			
	n systems	%	n cases	%	n systems	%	n cases	%
0	13	39%	0	0%	2	7%	0	0%
1-3	10	30	16	5	6	21	13	1
4-10	7	21	43	14	6	21	40	4
11-25	1	3	12	4	7	25	116	11
26-50	1	3	40	13	4	14	151	14
51-100	0	0	0	0	1	4	73	7
>100	1	3	200	64	2	7	696	64
Total	33	99%[a]	311	100%	28	99%[a]	1,089	101%[a]

[a]Due to rounding.

Source: NIJ Questionnaire Responses.

The distribution of cumulative total AIDS cases across correctional systems in the United States remains quite skewed (Figure 3). Five more state systems reported cases than did so in 1987. Only seven state correctional systems still report having had no AIDS cases, down from 26 systems in 1985. Still, almost two-thirds of state and federal systems and almost one-half of reporting city and county systems have had ten or fewer cases of

AIDS among their inmates. At the other extreme, only seven state and federal systems and three city and county systems have had more than fifty cases. Five state and federal systems (10%) account for almost three-quarters of the total AIDS cases in these systems, while three responding city and county systems (11%) account for over 70 percent of the total cases in those systems.

Figure 4 shows that the Middle Atlantic states still account for the majority of inmate AIDS cases. While the regional distribution is less uneven than it was in 1985, it did not change dramatically in the last year. Indeed, while the Middle Atlantic region's share of state system cases continued to decline between 1987 and 1988, that region's share of city/county jail cases actually rose in the last year. In both types of systems, the South Atlantic and Pacific region's shares of cases either remained constant or declined between 1987 and 1988.

Clearly, all correctional systems will have an inmate AIDS case sooner or later. However, it is likely that the distribution of cases across correctional systems and geographic regions will continue to be quite uneven.

The incidence rate of AIDS in the total U.S. population was 13.3 cases per 100,000 in 1988, up from 8.6 in 1987.[55] Incidence rates for individual states ranged from virtually zero to 39, with most under 10. Incidence rates in most correctional systems have increased since last year, reflecting the growing number of AIDS cases in these populations. In state and federal correctional systems, incidence rates ranged from zero to 536, although more than one-half of the states have incidence rates less than 25 and only 8 have rates over 100.[56] The aggregate incidence rate for all state and federal systems was 75 cases per 100,000 inmates in 1988, up from 54 in 1987.

Incidence rates in city/county correctional systems ranged from zero to 2,038 cases per 100,000 in 1988, but almost one-half of the systems had rates under 25. The aggregate rate for responding city/county jurisdictions was 183 cases per 100,000. Rapid population turnover makes these jail system incidence statistics extremely suspect. The aggregate AIDS incidence rate for all Canadian inmates was 22 cases per 100,000, substantially lower than in the United States.

AIDS incidence rates are predictably higher in correctional systems than in the outside world, because of the over-representation among inmates of intravenous drug users and others with histories of high-risk behavior. There is an extremely wide range of incidence rates in prison and jail systems, reflecting the uneven distribution of total correctional AIDS cases across systems and regions.

Characteristics of Inmate AIDS Cases. The vast majority of inmate AIDS cases in the United States and Canada continue to be among men (95 percent in the United States, 94 percent in Canada). However, total female cases in U.S. correctional systems increased at a faster rate between 1987 and 1988 than total male cases (95 cases to 157 cases, for a 65% increase, as opposed to a 59% increase in male cases).

Data on racial and ethnic backgrounds of inmate AIDS cases are incomplete, although more complete than in 1987. Over 60 percent of U.S. cumulative total inmate cases (1,933) were classified by racial and ethnic group. Of these, 521 (27%) were white, 880 (46%) were black, and 532 (27%) were Hispanic. These data reflect the over-representation of minorities among prisoners with AIDS, as in AIDS cases in the outside world. In Canada, 26 of 27 cases classified as to racial and ethnic group were white, and one was black.

Prison and jail AIDS cases continue to be overwhelmingly attributed to IV drug use and homosexuality. Data on transmission factors are also incomplete, but in those jurisdictions offering statistics, the mean percentage of male cases attributed to IV drug use was 71 percent, while the mean percentage attributed to homosexual activity was 45 percent. Among female cases, 95 percent, on average, were attributed to IV drug use.

Particularly high percentages of AIDS cases are attributed to IV drug use in the Middle Atlantic region, reflecting the high HIV infection rates among IV users in this part of the country. For example, analysis of AIDS cases among New York state prisoners through July 31, 1988 reveals that 94 percent had histories of IV drug use. A study of New York state inmates who died of AIDS between 1981 and 1987 found that the typical inmate case was an unmarried male Hispanic or black IV drug user from New York City. The average age of these inmates was 34 years and most had been convicted of property or drug-related offenses.[57]

AIDS-Related Complex (ARC) Among Correctional Inmates. As noted earlier, ARC is no longer considered a useful category by many scientists. Possibly as a result, many correctional systems, including most of those with the largest number of AIDS cases, do not keep statistics on ARC. However, even though the data are incomplete, we report them as a rough indicator of the number of prisoners with lesser forms of symptomatic HIV disease. Forty-three state and federal systems reported 824 current cases of ARC, while 19 city/county systems reported 174 current cases. Nine Canadian correctional systems reported three current ARC cases.

Figure 4

REGIONAL DISTRIBUTION OF CUMULATIVE TOTAL AIDS CASES BY TYPE OF SYSTEM, UNITED STATES
(Federal Bureau of Prisons Excluded)

State Prison Systems

Region	November 1985 n Cases	November 1985 % of Total	October 1988 n Cases	October 1988 % of Total
New England[a]	16	3.7%	111	5.9%
Mid-Atlantic[b]	327	75.5	1,111	59.4
E.N. Central[c]	6	1.4	67	3.6
W.N. Central[d]	0	0.0	18	1.0
S. Atlantic[e]	49	11.3	266	14.2
E.S. Central[f]	1	0.2	28	1.5
W.S. Central[g]	12	2.8	98	5.2
Mountain[h]	2	0.5	32	1.7
Pacific[i]	20	4.6	140	7.5
Total	433	100.0%	1,871	100.0%

City/County Jail Systems

Region	November 1985 n Cases	November 1985 % of Total	October 1988 n Cases	October 1988 % of Total
New England[a]	0	0.0%	1	0.9%
Mid-Atlantic[b]	222	71.4	722	66.3
E.N. Central[c]	8	2.6	18	1.7
W.N. Central[d]	1	0.3	6	0.6
S. Atlantic[e]	24	7.7	80	7.3
E.S. Central[f]	0	0.0	3	0.3
W.S. Central[g]	3	1.0	13	1.2
Mountain[h]	1	0.3	47	4.3
Pacific[i]	52	16.7	199	18.3
Total	311	100.0%	1,089	100.9%[j]

[a] Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut

[b] New York, New Jersey, Pennsylvania

[c] Ohio, Indiana, Illinois, Michigan, Wisconsin

[d] Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas

[e] Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida

[f] Kentucky, Tennessee, Alabama, Mississippi

[g] Arkansas, Louisiana, Oklahoma, Texas

[h] Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada

[i] Washington, Oregon, California, Alaska, Hawaii

[j] Due to rounding

Source: NIJ Questionnaire Responses.

Figure 5

RESULTS OF MASS SCREENING PROGRAMS IN CORRECTIONAL FACILITIES[a]

Jurisdiction	Number Tested	Inmate Category(ies)	Number HIV Seropositive	% Seropositive
Alabama	13,659	all incoming inmates and current inmates (1987-1989)	149	1.1%
Colorado	8,052	all incoming inmates (12/85-11/88)	69	0.9
Georgia	4,759M 371F	all incoming inmates (7/88-11/88)	152M 9F	3.2M 2.4F
Idaho	1,150	all incoming inmates (9/87-11/88)	4	0.3
Iowa	2,549	all incoming inmates (1/88-11/88)	6	0.2
Missouri	8,671	all incoming inmates (7/87-10/88)	45	0.5
	5,369	all releasees (11/87-10/88)	4	0.1
Nebraska	710M	all incoming adult male inmates (1/86-7/86)	0M	0.0M
	2,314M	all incoming adult male inmates (3/87-10/88)	12M	0.5M
Nevada	6,021	all incoming inmates (9/85-12/87)	81	1.3
	5,010	all incoming inmates (1/88-11/88)	91	1.8
	3,820	current inmates (8/85-9/85)	96	2.5
New Hampshire	575M	all incoming inmates (10/87-10/88)	1M	1.7M
	900M	all current inmates (10/87-10/88)	0M	0.0M
New Mexico	526M 54F	all incoming inmates (2/88-6/88)	3M 1F	0.6M 1.9F
Oklahoma	7,789M 836F	all incoming inmates (4/87-10/88)	45M 2F	0.6M 0.2F
	8,608M 606F	all current inmates (6/87-8/87)	41M 0F	0.4M 0.0F
South Dakota	1,025	all incoming inmates (as of 7/87)	1	0.1
	982	all current inmates (7/87)	2	0.2
West Virginia	728M	all incoming male inmates (9/87-10/88)	2M	0.3M
Wyoming	993M	all incoming and current male inmates (9/87-11/88)	3M	0.3M
Federal Bureau of Prisons	9,640	all incoming inmates (6/87-10/87)	240	2.5
	23,172M 1,887F	all releasees (6/87-12/88)[b]	393M 24F	1.7M 1.3F
	5,239M 935F	10% random sample of incoming inmates (11/87-12/88)[b]	129M 49F	2.5M 5.2F

[a]This figure includes all available results. The number of jurisdictions listed, therefore, does not correspond exactly to the number of systems currently conducting mass screening or planning to institute such programs, as shown in Figure 15, page 31.

[b]R. Olson (Federal Bureau of Prisons), personal communication, January 1989.

Source: NIJ Questionnaire Responses.

Figure 6

RESULTS OF "RISK GROUP" SCREENING PROGRAMS IN CORRECTIONAL FACILITIES[a]

Jurisdiction	Number Tested	Inmate Category(ies)	Number HIV Seropositive	% Seropositive
Kansas	150	unspecified risk groups (as of 10/87)	6	4.0%
Montana	68M	unspecified risk groups (7/87-10/88)	0M	0M
Ohio	62F	all pregnant females (as of 10/88)	0F	0F
Texas	6,772M 860F	unspecified risk groups (10/87-10/88)	304M 26F	4.5M 3.0F
Harris County (Houston, Texas)	526	unspecified risk groups (10/86-10/87)	175	33.3
Hennepin County (Minneapolis, MN)	250	homosexuals, IV drug users (1/88-12/88)	2	0.8
Jefferson County (Louisville, KY)	16	homosexuals, IV drug users (10/87-10/88)	5	31.3

[a]This figure includes all available results. The number of jurisdictions listed, therefore, does not correspond exactly to the number of jurisdiction conducting "risk-group" screening, as shown in Figure 13, page 31.

Source: NIJ Questionnaire Responses.

HIV Seroprevalence Among Correctional Inmates. There continues to be a great deal of interest in HIV seroprevalence rates among prisoners. Figures 5-8 summarize survey responses regarding various HIV antibody testing programs. Figure 5 reports results of mass screening programs—i.e., mandatory, identity-linked testing of all incoming inmates, all current inmates or all releasees. Most of the seroprevalence rates found in such testing programs remain under 1 percent, and all are under 3.5 percent, except female intakes in the Federal Bureau of Prisons. Of course, the correctional systems in the states with the largest numbers of AIDS cases have not undertaken mass screening programs.

Figure 6 shows the results of "risk-group" screening programs—i.e., mandatory testing of all identifiable members of "risk groups" such as IV drug users and male homosexuals. Such programs are problematical because of the difficulty of identifying all members of the groups of interest. Predictably, some of these seroprevalence rates are higher than those found in mass screening programs. However, most are still quite low. Notably, in the Texas Department of Corrections, where more than 7,500 "risk-group" members were tested between 1987 and 1988, the seroprevalence rates were only 4.5 percent and 3 percent, respectively, among men and women. The results from Harris County, Texas (33%) may thus overstate seroprevalence among "risk-group" members statewide.

Results of blind epidemiologic studies are summarized in Figure 7. These are generally anonymous studies in which no identifying information is associated with test results. Most of these seroprevalence rates are also very low, with the notable exceptions of New York state and Maryland. These high seroprevalence rates no doubt reflect the high infection rates among IV drug users in New York City and Baltimore. The Maryland figures held remarkably constant for three years (1988 data are not yet available) which perhaps suggests that HIV was not spreading as rapidly among IV drug users as it had been earlier.

In the New York study, seroprevalence rates were particularly high for IV drug users in the sample (43%), as well as homosexuals (39%) and Hispanics (24%). The study was done at Downstate Correctional Facility in Brooklyn, a reception center for New York City, so it may overstate the statewide seroprevalence. However, since a substantial majority of New York state inmates are from the New York City metropolitan area, the overestimate is likely to be slight. New York is planning to explore this issue in further blind studies at upstate reception centers. In the California study reported in Figure 7, HIV seroprevalence was substantially higher

Figure 7

RESULTS OF BLIND EPIDEMIOLOGICAL STUDIES IN CORRECTIONAL FACILITIES

Jurisdiction	Number Tested	Inmate Category(ies)	Number HIV Seropositive	% Seropositive
California	5,372M	all new male inmates[a] (4/88-5/88)	137M	2.6%M
	807F	all new female inmates[a] (4/88-6/88)	25F	3.1F
Hawaii	780M 56F	voluntary: incoming inmates at 14 days (2/88-10/88)	4M 0F	0.5M 0.0F
Indiana	602	all new inmates (5/87-7/87)	1	0.2
Maryland	748M	all new male inmates (4/85-6/85)	52M	7.0M[b]
	39F	all new female inmates (4/85-6/85)	6F	15.4F[b]
Michigan	571	all new inmates (11/86)	5	0.9
New Mexico	466M 35F	consecutive incoming inmates (10/87-2/88)	4M 0F	0.9M 0.0F
New York (state)	494M	all incoming inmates at Downstate Correctional Facility, Brooklyn (12/22/87-1/8/88)[c]	84M	17.0M
Oregon	977	all incoming inmates (9/87-2/88)	12	1.2
Washington (state)	756M	all incoming inmates (9/87-1/88)	5M	0.7M
Wisconsin	997M	48% random sample of incoming male inmates (1986) (1/86-9/86)[d]	3M	0.3M
	1,689M	all incoming male inmates (1/87-8/87)[d]	9M	0.5M
King County (Seattle, WA)	199	all inmates visiting clinic (3/87-6/87)	0	0.0
Maricopa County (Phoenix, AZ)	616M 94F	random sample (7/88-8/88)	7M 1F	1.1M 1.1F
San Bernardino Cty, CA	250M 250F	voluntary: during one week in 6/88	9M 2F	3.6M 0.8F

[a] J.A. Singleton et al., *HIV Seroprevalence Among Prisoners Entering the California Correctional System*, (Sacramento, California: Department of Health Services, January 1989)

[b] These percentages held constant in two subsequent intake seroprevalence studies done in 1986 and 1987. 1988 data are not yet available.

[c] B.I. Truman et al., "HIV Seroprevalence and Risk Factors Among Prison Inmates Entering New York State Prisons." Presented at 4th International AIDS Conference, Stockholm, June 1988.

[d] Jeffrey P. Davis (State Epidemiologist), "Prisoner-based Seroprevalance Survey for Antibody to HIV." Memorandum dated January 18, 1988.

Source: NIJ Questionnaire Responses.

in inmates from the San Francisco Bay area than in inmates from other parts of the state.[58] Additional blind studies of new inmates are being coordinated in ten correctional systems by the Johns Hopkins School of Hygiene and Public Health under the joint sponsorship of CDC and NIJ.

Finally, Figure 8 presents the results of a variety of other testing programs, primarily those based on inmate re-

Figure 8

RESULTS OF OTHER HIV ANTIBODY TESTING PROGRAMS IN CORRECTIONAL FACILITIES

Jurisdiction	Number Tested	Inmate Category(ies)	Number HIV Seropositive	% Seropositive
Massachusetts	783M 245F	Inmate Request (10/87-10/88)	108M 60F	13.8%M 24.5F
Minnesota	889M 21F	Inmate Request (10/85-10/88)	24M 0F	2.7M 0.0F
Missouri	211	Involvement in Incident (7/87-10/88)	12	5.7
	1,106	Inmate Request (7/85-10/88)	13	1.2
Montana	38M	Inmate Request (7/87-10/88)	0M	0M
Oregon	106M 15F	Inmate Request (3/88-9/88)	8M 0F	7.5M 0.0F
Rhode Island	277M 146F	Inmate Request (7/85-10/88)	49M 39F	17.7M 26.7F
Washington (state)	817M 23F	Inmate Request (10/85-10/88)	12M 0F	1.5M 0.0F
Federal Bureau of Prisons	5,855M 1,516F	Voluntary (6/87-12/88)[a]	173M 50F	2.9M 3.3F
Allegheny County (Pittsburgh, PA)	65M 13F	Inmate Request (7/87-10/88)	8M 1F	12.3M 7.7F
Cook County (Chicago, IL)	142M 23F	Involvement in Sexual Assault or Human Bite (1/88-11/88)	8M 0F	5.6M 0.0F
Lake County (Gary, IN)	2,287	Inmates Who Consent to Health Assessment[b]	21	0.9
Los Angeles County (Los Angeles, CA)	49M 5F	Involvement in Incident (5/85-10/88)	2M 1F	4.1M 20.0F
Orange County (Santa Ana, CA)	1,840	Inmate Request (As of 10/87)	50	2.7
Sacramento County (Sacramento, CA)	234F	Inmate Request (12/87-11/88)	5F	2.1F
Santa Clara County (San Jose, CA)	348F	Voluntary (As of 10/87)	6F	1.7F
Suffolk County (Boston, MA)	139M	Voluntary	24M	17.3M
Saskatchewan (Canada)	34	Inmate Request (10/87-10/88)	0	0.0

[a] R. Olson (Federal Bureau of Prisons), personal communication, January 1989.

[b] A.D. Holliday, J. Carey, and D.J. Watson, "Results of a Three-Year HIV Screening Program at a 300-Inmate County Jail," Paper presented at the 12th National Conference on Correctional Health Care, Lake Buena Vista, Florida, October 31, 1988.

Source: NIJ Questionnaire Responses.

quest and involvement in a potential transmission incident. These seroprevalence rates show significant variation. Some are quite high, including those from the on-request programs in Massachusetts and Rhode Island and the voluntary program in Suffolk County (Boston), Massachusetts. Of course, individuals seeking testing are likely to be those who have reason to believe that they are at high risk for HIV infection. Nevertheless,

these testing programs are revealing significant numbers of seropositive inmates, particularly in correctional systems in the Northeast. Connecticut's program, which includes inmates with clinical indications of HIV disease, those involved in possible transmission incidents, and those who request testing, has identified 852 seropositive prisoners since it was begun in late 1985. Of these, 461 are currently in the system.

Transmission of HIV Infection in Correctional Facilities. Transmission of HIV among prisoners remains an important and controversial issue, about which we still have relatively little data. Fragments of information from several correctional systems suggest low rates of transmission, but these are not conclusive. In Maryland, for example, voluntary followup testing was conducted in May 1987 on 393 inmates who had been seronegative on intake one or two years earlier. These participants provided a total of 482 prison-years of potential exposure. Two were seropositive on followup, yielding an infection rate of .4 percent per year. This is a low rate, but applied to the total Maryland prison population, it translates into a non-trivial 60 new infections per year. The study is important, but it has a basic methodologic problem. Because testing was done on a voluntary basis, selection bias no doubt occurred which make the results difficult to interpret.[59]

A CDC investigation of HIV transmission in the Nevada state prison system avoided the problem of self-selection because intake and release testing are mandatory for all prisoners. Of 1,069 inmates seronegative on intake, two seroconverted by the time of their release. These subjects had served 1,207 inmate-years in prison. Because of the "window period" between infection and appearance of detectable antibodies, it could not be determined for certain whether these seroconversions occurred as a result of in-prison exposures to HIV.[60] If both are assumed to be the result of exposure during incarceration, the study yields an infection rate of 0.17 percent per year. Applied to the 1988 Nevada inmate population (4,903), this would mean eight new infections per year, substantially lower than the estimate for Maryland.

The Federal Bureau of Prisons (FBOP) is retesting the seronegative members of its 10-percent random samples of intakes at 3 and 6 months and at six-month intervals thereafter. These results show that of 14,846 initially seronegative males, nine tested positive on follow-up. Of 1,082 initially seronegative females, none tested positive on follow-up. Of the nine possible male seroconverters, six have been investigated. All six tested positive at the three-month follow-up and all admitted to high-risk behavior prior to incarceration. It is likely, therefore, that at least some of these individuals were infected prior to entering the prison system and tested negative at intake because they were in the "window period."[61]

Another measure of HIV transmission in institutions is provided by comparing seroprevalence rates among intakes and releasees (see Figure 5). ("Releasees" refers to inmates paroled and inmates released without supervision at the expiration of their sentences.) Through 1988, these rates were actually lower for releasees than for intakes in the FBOP and the Missouri state correctional system, suggesting little if any transmission. In both systems, this seeming anomaly is explained by the different time periods and varying lengths of incarceration covered – that is, the intake and release seroprevalence rates do not cover the same cohorts of inmates. Indeed, many of those tested at release had been incarcerated since long before intake testing began.

Finally, CDC is funding a blind epidemiologic study of HIV prevalence and transmission among male prison inmates in Illinois. This study is being conducted by the Illinois Department of Corrections and Abt Associates. Results of the transmission study, which is based on a one-year followup of approximately 2,500 inmates, should be available in the summer of 1990. As further studies are conducted, a better and more systematic understanding of the extent of HIV transmission in prisons and jails should begin to emerge.

3: Tuberculosis and HIV Infection

Increasing Incidence of Tuberculosis Associated with HIV Infection

The recent resurgence of tuberculosis in the United States population in general and in prisons and jails in particular has caused increasing concern among correctional officials.[62] In April 1988, the National Commission on Correctional Health Care (NCCHC) adopted a new policy calling on correctional systems to expand and intensify efforts to prevent and control tuberculosis. A major focus of the National Conference on Correctional Health Care in the fall of 1988 was tuberculosis and its association with HIV infection.

The increase in the incidence of tuberculosis and its relationship to the HIV epidemic has been documented in numerous studies. Patients with HIV-related immunosuppression are clearly more susceptible to progression from tuberculous infection to active disease. Thus, the increasing incidence of HIV infection has led directly to an increasing incidence of tuberculosis. The congruence of tuberculosis and HIV infection has been particularly severe in Northeastern cities like New York, but has been by no means limited to these cities. The combination of tuberculous and HIV infections is particularly common in certain subpopulations. These groups include black and Hispanic males between the ages of 20 and 45 and IV drug users, all groups which are over-represented in inmate populations.[63]

The particular concern for correctional systems is that HIV-related tuberculosis will continue to increase among inmates and staff and that inmates with tuberculosis will infect others in the system and in the community, after their release. Tuberculous infection, unlike HIV, is transmissible through the air. Extrapulmonary forms of tuberculosis, which are usually noncontagious, are seen more often in HIV-infected persons than in persons without HIV infection. However, a large proportion of HIV-infected tuberculosis patients have pulmonary disease, which is infectious. Thus, there is a real possibility of significant spread in the relatively closed environment of correctional institutions.[64]

Data from a number of state health departments already document the high rates of tuberculosis and tuberculous infection among inmates. A CDC survey of 29 states in 1984-1985 found that prisoners were 3 times more likely to develop tuberculosis than adults aged 15-64 living in the outside world. In New Jersey, the 1987 tuberculosis incidence rate was 110 cases per 100,000 among prison inmates as opposed to 10 in the total population. In California, these incidence rates were 80 and 13 cases, respectively. A blinded study of incoming New York State inmates in December 1987-January 1988 found that 18 percent were PPD-positive, indicating tuberculous infection. PPD positivity rates in the Georgia inmate population have been between 11 percent and 12 percent in the years 1986-1988. A positivity rate of 14 percent was found in the New Mexico inmate population in 1986-1987.[65]

The increasing incidence of tuberculosis in correctional facilities has been clearly tied to HIV infection in many cases. In New York, annual incidence of tuberculosis among prison inmates increased from 15.4 cases per 100,000 in 1976-1978 to 105.5 cases in 1986 to 132 cases in 1988. As in the outside population, excess cases were typically in black and Hispanic male IV drug users between the ages of 30-39. Researchers have eliminated the possibility of common-source outbreak in New York.[66]

By 1985-1986, the majority of New York inmate cases of tuberculosis were in persons with HIV infection or AIDS (53 percent). In 1988, this proportion rose to 75 percent. In Georgia 7 of 15 inmate cases of tuberculosis identified in 1988 were found to be HIV-positive (47%).[67]

In 1988, for the first time, the NIJ survey on AIDS in correctional facilities included a series of questions on tuberculosis and HIV infection. However, the data provided in response to these questions were very fragmentary. Sufficient data to calculate association between tuberculosis and HIV infection for 1988 were available from only 16 U.S. correctional systems. These data revealed that, on average, 7 percent of inmates in a given system identified in 1988 as being TB-infected or having active tuberculosis were also HIV-infected or had clinical AIDS. The majority of correctional systems did not know how many TB cases were HIV-infected, or did not have these data available. This may indicate a deficiency in screening and diagnostic practices, as well as a weakness in data collection. Correctional systems should be paying careful attention to tuberculosis among their inmates and staff, as well as to the links between tuberculosis and HIV infection.

Figure 9

LIVE AIDS TRAINING FOR INMATES

	State/Federal Prison Systems				City/County Jail Systems				Canadian Systems			
	October 1987 (n=51)		October 1988 (n=51)		October 1987 (n=33)		October 1988 (n=28)		October 1987 (n=12)		October 1988 (n=12)	
	n	%	n	%	n	%	n	%	n	%	n	%
• Live Training Provided[a]	48	94%	48	94%	22	67%	19	68%	9	75%	9	75%
• Live Training in All Institutions	N/A	N/A	39	77	N/A	N/A	18	64	N/A	N/A	7	58
• Mandatory Live Training	36	72	37	74	7	21	4	14	3	25	3	25

[a] Includes programs in operation and under development.

Figure 10

LIVE AIDS TRAINING FOR STAFF

	State/Federal Prison Systems				City/County Jail Systems				Canadian Systems			
	October 1987 (n=51)		October 1988 (n=51)		October 1987 (n=33)		October 1988 (n=28)		October 1987 (n=12)		October 1988 (n=12)	
	n	%	n	%	n	%	n	%	n	%	n	%
• Live Training Provided[a]	51	100%	49	96%	29	88%	25	89%	11	92%	10	83%
• Live Training in All Institutions	N/A	N/A	42	82	N/A	N/A	19	68	N/A	N/A	9	75
• Mandatory Live Training	45	90	47	94	21	64	16	7	6	50	4	33

[a] Includes programs in operation and under development.

Prevention and Control of Tuberculosis in Correctional Facilities

CDC has developed new guidelines for the prevention and control of tuberculosis in correctional facilities. The guidelines call for early case finding, reporting of all tuberculosis cases, periodic screening and careful medical monitoring of inmates and staff (including chest x-rays for those with positive tuberculin skin tests and those at risk for HIV infection, and HIV antibody testing for all TB cases and all with positive tuberculin skin tests), contact investigations (i.e. identification of others who may have been exposed to inmates with tuberculosis), medical isolation of inmates with active TB, and careful adherence to appropriate medication protocols for prophylaxis and treatment.[68]

The 1988 NIJ survey reveals that the majority of correctional systems do screen or plan to screen inmates for tuberculous infection—98 percent of state/federal systems, 79 percent of responding city/county systems, and 60 percent of responding Canadian systems. Virtually all state/federal systems screen at least some inmates at intake. The Mantoux method (using needle and syringe) was by far the most commonly reported tuberculin test, with only a few systems reporting use of multiple puncture tests. Most state and federal systems (82% of those responding to this question) reported "routine" use of chest x-rays in diagnosing tuberculosis,

but only about one-half of responding city/county systems and less than one-fourth of responding Canadian systems reported routine use of chest x-rays. As noted above, the CDC draft guidelines recommend more aggressive use of chest x-rays in diagnosing HIV-related TB. However, chest x-rays need to be carefully interpreted because X-ray findings in HIV-related tuberculosis are often atypical. In addition, false negatives on the PPD skin test may result from anergy, a condition commonly found in patients with clinical AIDS. Thus, sputum smear and culture examination are especially important tools for identifying infectious cases of tuberculosis in persons who are HIV-positive.[69]

The Texas, New York, and New Mexico correctional departments, among others, have instituted aggressive programs for the prevention, identification, and treatment of tuberculosis and HIV-related TB. Texas policy calls for isoniazid (INH) prophylaxis for many categories of inmates with positive PPD results, as well as for all "close contacts" of active tuberculosis cases. In most instances, INH therapy is to last for 6 months, or 12 months, if the individual is HIV-positive. As of November 1988, the Texas system had about 2800 inmates on preventive therapy.[70]

4. Development and Implementation of Correctional AIDS Policies

The development and implementation of AIDS-related policies in correctional systems requires a great deal of careful thought and coordination. Two state correctional systems have evolved innovative approaches to these tasks. This section briefly describes the policy formulation process followed (and the comprehensive plan adopted) in Oregon and the coordinated approach to infectious disease control employed in Texas.

Oregon's policy development process was focused on two key elements:

1) a study to determine HIV seroprevalence among inmates and to evaluate the relative effectiveness of mandatory and voluntary testing; and

2) a committee study of a range of policy options, resulting in issuance of a comprehensive plan. The Department of Corrections embarked on the process in the firm belief that the best policy would offer flexibility and would balance security, public health, and the rights of prisoners.

The committee included representatives from all parts of the correctional system—health services, institution management, educational and social services, correctional officers, HIV counselors, and legal counsel. There were also several representatives from the state Health Division. The committee met for five day-long sessions and developed a comprehensive plan which was furnished to key officials for comment. The revised plan was then submitted to the legislature.[71]

Based on the results of the testing study (described in more detail in section 6, below) and the committee's deliberations, the Oregon plan emphasizes voluntary testing, individual responsibility, and long-term behavioral change. Conceding that the "the most significant challenge to public health experts is to instill personal responsibility for change in inmates with high risk behavior," the committee evolved a strategy best calculated to meet the challenge. The plan represents a reasoned and enlightened approach to the problem of AIDS in corrections.[72]

Four strategies are elucidated which the committee stresses should be implemented for each individual in a stagewise fashion. These are provision of basic AIDS information, mandatory education, individual risk assessment, and counseling and voluntary testing (testing only to be provided after assessment and counseling). Housing decisions in Oregon are made on a case-by-case basis, taking into account medical and security/behavioral considerations. There are no blanket programmatic exclusions or restrictions based on HIV antibody status (except regarding food service work assignments). Disciplinary sanctions focus on "risk behavior rather than HIV Antibody status."[73]

The Texas Department of Corrections created an AIDS Coordinating Office in August 1987. This office includes an AIDS coordinator (who is a registered nurse) and two clerks. These staff are responsible for the following: 1) maintaining a comprehensive data collection program on AIDS in the prison system; 2) addressing all inmate and employee concerns regarding AIDS, including education, prevention, and medical care; 3) acting as a clearinghouse for AIDS policies and data; 4) coordinating an infection control program and followup of any occupational exposures to HIV; and 5) ensuring that all state reporting requirements are met.[74]

Each institution within the Texas system has a designated infection control coordinator who acts as liaison with the central-office AIDS coordinating office. These institutional coordinators also meet on a monthly basis. Finally, the department has established an AIDS Education Committee which developed and oversaw a large-scale education program for staff and inmates. The committee is also in charge of ongoing AIDS education.[75]

The Oregon and Texas approaches represent just the sort of coordinated, comprehensive responses necessary to be most effective in meeting the challenge of AIDS in corrections. They warrant the careful consideration of all correctional professionals.

5: AIDS Education and Training

Live Training

Training and education represent the cornerstone of the response to AIDS in any setting. In correctional facilities, previous NIJ reports have stressed the importance of regular, mandatory, live training sessions for inmates and staff that provide opportunities to hear knowledgeable speakers address the particular questions and concerns of these audiences. Virtually all correctional systems now offer written information and audio-visual presentations on AIDS to both inmates and staff, but we remain convinced of the critical importance of live training sessions.

Only through regular live training can the persistent misinformation about AIDS be effectively countered. Even very recent studies have shown that many people continue to hold inaccurate views of HIV transmission. For example, the August 1987 National Health Interview Survey found that 21 percent of respondents thought a person could be infected by working near someone with AIDS, one-fourth believed that one could be infected through donating blood, and 38 percent believed in HIV transmission through mosquito bites. A recent study of the New York state correctional system found many staff in need of education about AIDS and reluctant to have any contact with persons with AIDS. In one New York institution, an inmate barber refused to give haircuts to AIDS patients.[76]

Live, face-to-face sessions are also best for fostering an appropriately balanced view of AIDS that avoids the extremes of alarmism and complacency. To be sure, there are difficult challenges in presenting this training. Instructors must be thoroughly knowledgeable and able to present complicated scientific concepts in simple, easy-to-understand terms. One of the greatest challenges, for example, is to convince audiences of both key truths contained in the seemingly paradoxical statement that the AIDS virus is "both fragile and deadly."[77]

Until 1987, NIJ surveys showed steady increases in the percentages of correctional systems offering live training. However, as revealed in Figures 9 and 10, there has been little movement in the last year. Over 90 percent of state/federal systems, about two-thirds of city/county systems, and three-fourths of Canadian systems continue to provide live AIDS training for inmates. All but two state systems provide live training for staff, whereas in 1987, all reported doing so. Similarly, one Canadian correctional system stopped live training for staff between 1987 and 1988. The percentage of city/county systems with live training for staff remained virtually constant.

Figures 9 and 10 also show the extent to which live training is provided in all institutions within a system and the proportion of systems in which such training is mandatory. There is some significant lack of uniformity within systems in the provision of live training. This is particularly true in city and county systems. Most U.S. systems have mandatory staff training on AIDS and a majority of state/federal systems have mandatory inmate training. However, probably as a result of logistics problems posed by high turnover, relatively few city/county systems present mandatory inmate training. As noted in previous reports, this high turnover in jails may produce more risk of transmission, making mandatory live training all the more important.

Several live education programs in correctional systems are worthy of mention this year. The Texas education program has already been briefly described. In this massive effort, new curricula were developed, tested and refined and, between November 1987 and January 1988, training teams provided live sessions to 53,000 inmates and staff. This represented 90 percent of the inmates in the system and 96 percent of the correctional staff. Inmate training was two hours long and staff received three hours of training.[78]

An excellent full-day staff training program on AIDS and other communicable diseases has been developed by the Division of Youth Services of the Virginia Department of Corrections. This is an extremely comprehensive, accurate, and up-to-date training program that deals with the specific AIDS-related concerns of correctional staff. Especially useful is the communicable disease control demonstration portion of the training that presents a series of specific typical situations to small groups and elicits their discussion of the real risk of transmission involved, as well as the appropriate prevention and response measures.[79]

Finally, an innovative approach to live AIDS training is being implemented in Oregon. The Oregon correctional system emphasizes individual counseling and risk assessment. However, inmates may be stigmatized if they openly seek AIDS-related information and counseling. Therefore, Oregon is working on ways to make

information services more confidential, including providing information services over institutional telephones.[80]

Live training for staff is commonly given both as part of initial training for new hires and on an in-service basis. Live training for inmates is commonly provided at intake and during incarceration. Notably, however, relatively few correctional systems provide live AIDS training to inmates just before they are released. Only one-quarter of state/federal systems and less than 10 percent of city/county jail systems provide training at release. No Canadian systems offer this training. This would appear to be an excellent opportunity to reinforce AIDS education as prisoners go back into the community where there will be even more chance to be infected and to infect others. Correctional systems should give serious consideration to exploiting this important educational opportunity.

Involvement of Inmates and Staff in Training Development and Presentation

One way of enhancing the credibility of AIDS training is to involve inmates in its development and presentation. With some notable exceptions, however, correctional systems have not seen fit to pursue this promising strategy. In only twelve state/federal systems (24%) and 2 city/county systems (7%) were inmates involved in training development. No Canadian correctional systems reported such involvement. Similarly, only 7 state/federal systems (14%), one jail system (4%), and no Canadian systems used inmate representatives to present training. In New York state, an inmate peer training program is in operation at one maximum-security institution.[81] Several state correctional systems, including those in Georgia, South Carolina, and Missouri have involved inmates in other aspects of AIDS education, including videotape production and poster design. Georgia inmates have recently completed an AIDS video titled "Con to Con."

Correctional staff are much more commonly involved than inmates in the development and presentation of AIDS training. Most systems use staff trainers and correctional officers unions have participated in training development. Credibility can be enhanced by providing the same training to medical and security staff. This strategy, which has been employed in New York City, helps to stifle mistrust that might arise if the different groups were presented different information.[82]

Content of AIDS Training

There has been controversy around the content of inmate AIDS training – in particular, whether to present education on safe sex practices and methods of cleaning drug injection equipment. Some believe that since homosexual activity and IV drug use are proscribed in prisons and jails, it is inappropriate to provide such information. Moreover, opponents argue, it may also be inconsistent to provide information but to withhold access to the means to effectuate that information – i.e. condoms and bleach bottles. It appears, however, that many correctional systems can live with this inconsistency. As will be discussed later in this report, very few correctional systems make condoms available to inmates and, to our knowledge, none distribute bleach. On the other hand, many correctional systems do provide training on safe sex and needle cleaning techniques. Two-thirds of state/federal systems, 57 percent of responding city/county jail systems, and 58 percent of Canadian systems provide safe sex education. Oregon is attempting to encourage inmates to practice non-risky alternative expressions of sexuality.[83] Almost 40 percent of state and federal systems, one-half of city/county systems, and one-third of Canadian systems offer education on needle cleaning.

Objectives of AIDS Training

AIDS training has two basic objectives: to foster behavior change and risk reduction, thus reducing transmission of HIV in institutions; and to counteract the erroneous views and allay the concerns of inmates and staff regarding casual transmission of the virus. It is true that behavior change and risk reduction present difficult challenges in correctional populations in which IV drug users and other "hard-to-reach" individuals may be over-represented. Sex and drug use are biologically-based, socially complex behaviors that are difficult to change. Moreover, truly effective risk reduction requires extreme behavioral change. But AIDS education can and has resulted in significant behavior change in these populations.[84] In any case, it is imperative that the best effort possible be made to provide effective AIDS education including informational sessions and individual counseling, because lives are clearly at stake.

Does education succeed in reducing levels of concern about AIDS among correctional inmates and staff? It is difficult to answer the question without systematic evaluation of education programs, which few correctional systems have undertaken. More such studies need to be done as a way of gauging behavioral change and making education more responsive to the needs and concerns of the audiences. One correctional medical director

contends that actual experience with HIV-infected prisoners is more important than educational programs in reducing concern among staff and inmates.

As in the 1987 survey, there was no clear pattern in response to the questions regarding levels of inmate and staff concern about AIDS. More of those responding estimated that staff and inmate concern had remained about the same since 1987 than believed levels of concern had risen or fallen in the last year. Again, there seems to be neither dramatic decline nor increase in concern. This suggests that regular AIDS education will be required over the long term of the epidemic.

6. HIV Antibody Screening and Testing

The Debate on Mass Screening Continues

The debate over mandatory HIV Antibody screening in prisons and elsewhere continues. There is still substantial public sentiment for testing all prison inmates. Many people continue to believe that large-scale testing represents a "magic bullet" for AIDS, or at least that it is a concrete step that government can take to show that it is "doing something" about AIDS.[85]

Correctional systems continue to report that they are under pressure regarding their testing policies. More than two-thirds of state and federal correctional systems, 21 percent of city/county systems, and one-third of Canadian systems have received such pressure. Pressure has come most commonly from legislatures, city and county officials, correctional staff, and inmates. Most of the pressure was in favor of mandatory screening and expanded notification of test results. Sixty percent of state and federal systems reported pressure in favor of these policy changes.

On the other hand, many people within and outside corrections continue to resist mandatory screening. They argue that such programs will be less effective than voluntary testing in reducing transmission of HIV. The Oregon committee studying correctional AIDS policy concluded that "a coercive environment will not result in the long-term behavior changes necessary to stop the spread of HIV infection."[86] Critics of mandatory testing cite problems with the accuracy of the tests and maintaining the confidentiality of results, and contend that mandatory testing and segregation of seropositives represent punitive policies that divert attention and resources from more appropriate measures such as education and prevention of predatory behavior.

Trend to Mass Screening in Correctional Systems Slows

This year's NIJ survey shows that the strong move toward mass mandatory screening in correctional facilities which occurred between 1986 and 1987 has not continued. Figure 11 reveals that fourteen state systems and the Federal Bureau of Prisons, but no city/county or Canadian systems, have mass screening policies.

This represents a net increase of only two systems since 1987, as opposed to a jump from 3 to 13 between 1986 and 1987. Since the 1987 survey was taken, three state systems began mass screening: Georgia, New Mexico, and Wyoming. New Mexico has since discontinued the policy, as has South Dakota, based largely on the extremely low seroprevalence rates discovered. Utah, which, in 1987, reported plans to institute mass screening, now reports that the program is still under consideration by the legislature. Finally, Michigan and Rhode Island expect to begin mandatory testing programs early in 1989, so they are counted in the survey as mass screening systems. All the states currently conducting mass screening expect to continue those policies in the coming year.

Patterns of HIV Antibody Testing in Correctional Systems

Figures 12 and 13 summarize correctional testing policies. "Risk-group" screening has declined somewhat since 1987. However, some systems, including Texas and Arkansas continue to employ this policy as an alternative to mass screening. Arkansas conducts an HIV screening interview with all new inmates and requires testing of all identified homosexuals, IV drug users, prostitutes, transfusion recipients, and those who exhibit clinical indications of sexually transmitted diseases, tuberculosis, or HIV infection.[87]

More systems are offering testing on request (and on a voluntary basis) and conducting blind epidemiologic studies of HIV seroprevalence. The latter permit measurement of the extent of the problem and projection of resource needs while avoiding the problems of mandatory, identity-linked testing. Arkansas and Virginia are planning blind seroprevalence studies. Most systems continue to test in the presence of clinical indications.

Several states conducted studies to evaluate the effectiveness of mandatory versus voluntary programs in securing the testing of the individuals at highest risk for HIV infection. Oregon found that voluntary counseling and testing would be likely to reach the vast majority of those at risk, if accompanied by an aggressive education and individual risk assessment program. In Wisconsin, the results of a blinded (non-voluntary) seroprevalence study were compared with those from a concurrent voluntary testing program. The difference in the seroprevalence rates was not statistically significant and the voluntary program identified two-thirds of the seroposi-

Figure 11

CORRECTIONAL SYSTEMS WITH MASS SCREENING[a] PROGRAMS, OCTOBER 1988

State/Federal	City/County	Canadian
Federal Bureau of Prisons, Alabama, Colorado, Georgia, Idaho, Iowa, Michigan (planned) Missouri, Nebraska, Nevada, New Hampshire Oklahoma, Rhode Island (planned), West Virginia, Wyoming	None	None

[a] Defined as mandatory testing of all new inmates, all releasees, and/or all current inmates, regardless of the presence of clinical indications.

Figure 12

SUMMARY OF RESPONDING JURISDICTIONS' POLICIES ON HIV ANTIBODY TESTING FOR INMATES[a], OCTOBER 1988

Policies	State/Federal Prison Systems (n=51) n	%	City/County Jail Systems (n=28) n	%	Canadian Jail Systems (n=12) n	%
• HIV antibody screening						
—All new inmates	14	27%	0	0%	0	0%
—All current inmates	6	12	0	0	0	0
—All releasees	6	12	0	0	0	0
—Screening of "risk groups"[b]	11	22	6	21	2	17
• Testing on request	39	76	18	64	5	42
• Testing when clinically indicated	36	71	17	61	7	58
• Testing in response to incidents	25	49	7	25	3	25
• Testing for epidemiological studies	19	37	3	11	0	0
• No testing	0	0	2	7	3	25

[a] Includes actual and planned policies.

[b] Testing identifiable inmates with histories of high-risk behavior (e.g., homosexuals, intravenous drug abusers, prostitutes), regardless of whether they display clinical indications.

tive inmates. In both states, the study results contributed to decisions against mandatory screening and in favor of voluntary testing programs.[88]

The Presidential Commission on the HIV Epidemic recommends that correctional systems offer counseling and testing to all inmates on a voluntary basis and urges them to take advantage of it. In general, no testing should be done without complete pre- and post-counseling. As already noted, in the Oregon state correctional system, counseling and individual risk assessment are prerequisites for testing. The North Carolina Department of Correction has developed a detailed checklist and guide for HIV counseling.[89] Counselors should be aware of, and prepared to deal

Figure 13

MUTUALLY EXCLUSIVE CATEGORIZATION OF RESPONDING JURISDICTIONS' SCREENING/TESTING POLICIES FOR INMATES[a]

Policy	State/Federal Prison Systems				City/County Jail Systems				Canadian Systems			
	October 1987		October 1988		October 1987		October 1988		October 1987		October 1988	
	n	%	n	%	n	%	n	%	n	%	n	%
• Mass Screening (all incoming or all released inmates)	13	25%	15	29%	0	0%	0	0%	0	0%	0	0%
• Screening of "Risk Groups" (including pregnant women) but Not Mass Screening	12	24	8	16	9	27	5	18	3	25	2	17
• Testing Only in Clinical Indications, Incident Response, or Epidemiological Studies	24	47	22	43	13	39	13	46	3	25	4	33
• Testing Only on Inmate Request	1	2	6	12	7	21	4	14	1	8	2	17
• Other, Involving Voluntary/on Request	1	2	0	0	1	3	4	14	0	0	1	8
• No Testing	0	0	0	0	3	9	2	7	5	42	3	25
TOTAL	51	100%	51	100%	33	99%[b]	28	99%[b]	12	100%	12	100%

[a] Includes actual and planned policies. This is a hierarchical categorization. That is, jurisdictions that do mass screening are placed in that category, regardless of whether they also do testing for other purposes; jurisdictions that screen identifiable inmates with histories of high-risk behaviors, but no mass screening, are placed in the "screening risk groups" category regardless of whether they also do testing for diagnosis, incident response, or epidemiological studies.

[b] Due to rounding.

with, the possible psychological responses to test results, including suicidality. In addition, they should make maximum use of the counseling to foster positive behavioral change.[90]

An increasing number of states are offering testing to all inmates on request on the ground that this should be available to prisoners as it is in the outside world. However, some have continued to resist this policy. One correctional medical director commented that having the test so widely available might encourage seronegatives to engage in high-risk behavior and produce a false sense of security in inmates and staff.

Finally, an increasing number of correctional systems are establishing policies requiring testing of inmates involved in incidents in which HIV transmission was possible. Laws to this effect have been passed or proposed in many states. Elsewhere, correctional systems are increasingly able to obtain court orders for such testing. There is potential for abuse in this process, in that testing may be ordered following incidents which involve no realistic possibility of transmission. Alaska has established reasonable criteria for seeking court ordered testing: there must have been a rape, puncture wound, or "gross blood contact."[91]

7: Housing and Correctional Management Policies

Solidification of Trend to Case-By-Case Decision Making

Last year's report noted the decline of blanket segregation policies, especially for asymptomatic HIV-infected inmates and those with lesser forms of HIV disease, and the trend to case-by-case housing and programming decisions. This year's survey found a solidification of this trend, although many correctional systems report that they are under continued pressure to institute (or re-institute) segregation policies for HIV-infected prisoners. About one-half of state and federal systems reported such pressure in the past year.

Figures 14-16 summarize the housing policies of correctional systems. In state and federal and Canadian systems, AIDS cases are most often handled on a case-by-case basis (59% and 75%, respectively). Segregation or separation is still the most common policy for AIDS cases in city/county jail systems (46%), but case-by-case determination follows close behind (43%).

More than a third of responding correctional systems reported that prisoners with AIDS who are segregated or separated remain segregated or separated until they die or are released. They may be placed in prison hospitals or infirmaries or in separate non-medical units. Forty percent of state/federal systems also place inmates with AIDS in outside hospitals.

Presumptive housing in general population (with or without restrictions such as single-celling) is the most common policy for asymptomatic HIV-seropositive inmates in state/federal systems, city/county, and Canadian systems (71%, 65%, and 50%, respectively).

Some systems (12% of state/federal systems, 11% of responding city/county jail systems, and 8% of Canadian systems) still segregate or separate all asymptomatic seropositives. Separate non-medical units are most often used to house seropositives, particularly in state and federal systems.

Advantages of the Case-By-Case Approach

Figure 17 categorizes correctional systems by mutually exclusive housing combinations, showing the dominance of case-by-case approaches. Case-by-case determination has a number of advantages. It focuses on individual needs and characteristics rather than membership in a medical category, thus minimizing stigmatization of HIV-infected inmates. It ensures that inmates who are physically capable can have the least restrictive housing possible and the greatest possible access to programs and activities. This, in turn, may benefit the inmate psychologically and physically.

There are a number of good examples of case-by-case approaches to housing and programming decisions. The Oregon and Michigan systems base decisions entirely on individual medical and behavioral assessment, rather than on antibody status. (However, Michigan's policy may have to change if the system implements mass screening as planned.) New Mexico's policy is to make the least restrictive housing and programming assignments possible in keeping with the inmate's medical condition and the "safe and smooth operation" of the institution.[92]

In Maricopa County, Arizona, each incoming inmate is given a health risk and behavioral assessment which leads to the assignment of a risk assessment score. Classification counselors use this score to determine the inmate's housing assignment. In the Federal Bureau of Prisons, seropositive inmates are presumptively housed in general population, but can be segregated based on antibody status and engagement in predatory or promiscuous behavior.[93]

New York state, faced with an extremely large number of AIDS cases, has switched to a case-by-case policy and continues the process of reintegrating previously segregated prisoners who are medically capable of living in general population. Many are still segregated, but those who have returned to population have generally done well. There have been no reports of assaults against them. For many, reintegration has had a very positive psychological effect. One inmate described his feelings upon returning to general population: "I was elated, yet apprehensive...For the first time I realized I was back in control of my life again...I had to do it now...I had the freedom to go where I chose and that in itself was a high that I can't explain."[94]

This salutary effect is consistent with all the evidence indicating that persons with AIDS do best psychologically and physically when they are able to lead as normal lives as possible. There is strong evidence that most inmates with HIV infection and AIDS would rather be

Figure 14

HOUSING POLICIES FOR INMATES WITH AIDS, ARC, AND ASYMPTOMATIC HIV INFECTION: STATE AND FEDERAL PRISON SYSTEMS[a], OCTOBER 1988

	Jurisdictions Following this Policy for:					
	AIDS		ARC		Asymptomatic HIV Infection	
Policy	n	%	n	%	n	%
• All maintained in general population	0	0%	8	16%	24	47%
• All maintained in general population with restrictions[b]	1	2	9	18	12	24
• All segregated/separated[c]	20	39	8	16	6[d]	12
• Case-by-case determination	30	59	23	45	8	16
• No policy	0	0	3	6	1	2
TOTAL	51	100%	51	101%[d]	51	101%[e]

[a]These figures include hypothetical policies in jurisdictions that as yet have no cases in a particular category.

[b]This category includes single-celling.

[c]This category includes hospitalization, infirmary housing, and administrative separation in medical or non-medical units.

[d]In March 1989, Colorado discontinued mass screening and segregation of seropositives. This change is not reflected in this table, which covers policies in force at the time of the October 1988 survey.

[e]Due to rounding.

Figure 15

HOUSING POLICIES FOR INMATES WITH AIDS, ARC, AND ASYMPTOMATIC HIV INFECTION: CITY AND COUNTY JAIL SYSTEMS[a], OCTOBER 1988

	Jurisdictions Following this Policy for:					
	AIDS		ARC		Asymptomatic HIV Infection	
Policy	n	%	n	%	n	%
• All maintained in general population	1	4%	4	14%	15	54%
• All maintained in general population with restrictions[b]	2	7	2	7	3	11
• All segregated/separated[c]	13	46	6	21	3	11
• Case-by-case determination	12	43	14	50	7	25
• No policy	0	0	2	7	0	0
TOTAL	28	100%	28	99%[d]	28	101%[d]

[a]These figures include hypothetical policies in jurisdictions that as yet have no cases in a particular category.

[b]This category includes single-celling.

[c]This category includes hospitalization, infirmary housing, and administrative separation in medical or non-medical units.

[d]Due to rounding.

Figure 16

HOUSING POLICIES FOR INMATES WITH AIDS, ARC, AND ASYMPTOMATIC HIV INFECTION: CANADIAN SYSTEMS[a], OCTOBER 1988

	Jurisdictions Following this Policy for:					
	AIDS		ARC		Asymptomatic HIV Infection	
Policy	n	%	n	%	n	%
• All maintained in general population	0	0%	1	8%	3	25%
• All maintained in general population with restrictions[b]	0	0	2	17	3	25
• All segregated/separated[c]	2	17	2	17	1	8
• Case-by-case determination	9	75	6	50	4	33
• No policy	1	8	1	8	1	8
TOTAL	12	100%	12	100%	12	99%[d]

[a]These figures include hypothetical policies in jurisdictions that as yet have no cases in a particular category.

[b]This category includes single-celling.

[c]This category includes hospitalization, infirmary housing, and administrative separation in medical or non-medical units.

[d]Due to rounding.

Figure 17

HOUSING POLICY COMBINATIONS[a]

	State/Federal Prison Systems				City/County Jail Systems				Canadian Systems			
	November 1985		October 1988		November 1985		October 1988		October 1987		October 1988	
Policy Combination	n	%	n	%	n	%	n	%	n	%	n	%
• Segregate AIDS Cases; ARC Cases and Seropositives Maintained in General Population	3	6%	7	14%	3	9%	2	7%	0	0%	0	0%
• Segregate AIDS and ARC Cases; Seropositives Maintained in General Population	10	20	1	2	3	9	3	11	0	0	1	8
• Segregate All Categories	8	16	6	12	13	41	3	11	3	25	1	8
• No Segregation of Any Categories	2	4	1	2	0	0	3	11	0	0	0	0
• No Policy	8	16	0	0	1	3	0	0	0	0	0	0
• Combinations Involving Case-by-Case Determination	16	31	35	69	10	30	17	61	9	75	9	75
• Other Policy Combinations	4	8	1	2	3	9	0	0	0	0	1	8
TOTAL	51	101%[b]	51	101%[b]	33	101%[b]	28	101%[b]	12	100%	12	99%[b]

[a]For the purposes of this categorization, segregation means that the *basic* policy is to hospitalize (either within or outside the correctional system) or to segregate administratively the particular category of inmate, regardless of whether these inmates are returned to the general population when their symptoms subside.

[b]Due to rounding.

Figure 18

ACCESS TO PROGRAMS FOR SEGREGATED INMATES WITH AIDS AND ASYMPTOMATIC HIV INFECTION: STATE PRISON SYSTEMS, OCTOBER 1988

	Percent of Responding Systems Giving Access					
	AIDS (n=38)			Asymptomatic HIV (n=13)		
Program	Full	Limited	None	Full	Limited	None
Work	11%	61%	29%	38%	54%	8%
Education	29	63	8	54	46	0
Religious Services	53	47	0	77	23	0
Recreation	32	61	8	77	23	0
Law Library	50	39	8[a]	69	23	0[a]
Visits	63	26	5[a]	85	8	8
Conjugal Visits	5	3	79[a]	23	0	69[a]

[a]Responses incomplete as to this program.

in general population. There have been numerous lawsuits filed by such inmates seeking release from segregation, but none asking to be segregated. The Arizona state correctional system houses all HIV-infected inmates in a special unit, but reports that most of the residents want to return to general population.[95]

Patients who are actively ill and require special medical attention should obviously be placed in medical settings where they can best receive such care. But segregating inmates who are physically capable of living in general population can have devastating psychological effects. Such prisoners, placed as they often must be, with patients who are actively ill, are basically forced to "watch each other die" in isolation.[96]

Nevertheless, correctional systems are often faced with conflicts between security and medical care considerations. Medical staff generally recommend against blanket segregation policies. But correctional staff may be concerned that persons with AIDS will be in danger in general population or that it is worth segregating all HIV-infected inmates to reduce the possibility that any of them could infect others in the population. The Presidential Commission on the HIV Epidemic cautions that, while segregation may appeal to prison systems "as a means of further limiting the spread of HIV, such 'identify and isolate' plans are never 100 percent successful."[97] There is good reason to identify and segregate inmates whose behavior may place others at risk—e.g., through sexual victimization—but it seems less justifiable to segregate entire groups based solely on diagnostic or antibody status.

Segregated Inmates' Access to Programs

Experience has shown that it is difficult to offer a full range of programs and activities to segregated or separated inmates. Indeed, some critics of segregation, argue that it is impossible to provide such inmates meaningful access to programs. Figures 18 and 19 summarize access to programs among segregated inmates with AIDS and asymptomatic HIV infection in state/federal and city/county systems. This shows that relatively few systems totally exclude such segregated inmates from programs, with the exception of conjugal visits which are rarely available to HIV-infected inmates. In New York state, the correctional system's denial of conjugal visits to an inmate with AIDS was upheld by the state's Court of Appeals.[98]

Most state/federal systems provide limited program access for segregated AIDS patients. In state/federal systems, full access to religious services, law library, and non-contact visits (53%, 50%, and 63% of responding systems, respectively) are more common than full access to work, education, and recreational programs (11%, 29%, and 32% of responding systems). Most city/county systems report that AIDS patients have full access to religious services, law library, and regular visitation (65%, 88%, and 94%). More than one-half of these

Figure 19

ACCESS TO PROGRAMS FOR SEGREGATED INMATES WITH AIDS AND ASYMPTOMATIC HIV INFECTION: CITY/COUNTY JAIL SYSTEMS, OCTOBER 1988

	Percent of Responding Systems Giving Access					
	AIDS (n=38)			Asymptomatic HIV (n=8)		
Program	Full	Limited	None	Full	Limited	None
Work	24%	18%	47%[a]	25%	13%	50%[a]
Education	53	24	18[a]	25	38	25[a]
Religious Services	65	18	12[a]	38	38	13[a]
Recreation	59	29	6[a]	50	25	13[a]
Law Library	88	12	0	75	13	0[a]
Visits	94	6	0	100	0	0
Conjugal Visits	12	6	65[a]	13	63	0[a]

[a]Responses incomplete as to this program.

systems also report that prisoners with AIDS have full access to educational and recreational programs.

Asymptomatic seropositives generally have more access to programs than AIDS patients in state/federal systems, particularly as to work, education, and recreation programs (38%, 54%, and 77% of responding systems report full access for seropositives). Curiously, in city/county systems, access to some programs—especially educational and religious—seems to be more limited for asymptomatic seropositives than for inmates with AIDS.

Several systems have taken the position that there be no programmatic restrictions unless medically ordered based on individual clinical assessment. This is true in Illinois and Oregon. However, Oregon, like a number of other jurisdictions, does exclude HIV-infected inmates from food-service assignments in order to reduce fear in the institution. Such decisions are understandable but may undermine the educational message that HIV infection is not spread through food. Similarly, segregation of HIV-infected persons who are physically capable of living in general population may undermine the message that HIV is not transmissible through casual contact. Correctional systems should carefully consider the educational effects of their housing and programming decisions.[99]

The Presidential Commission on the HIV Epidemic recommended against abridgement of rights accorded to all inmates (e.g., parole and furlough) based solely on HIV infection status. However, nine state/federal correctional systems do have special regulations regarding furlough and visitation for HIV-infected inmates. In a recent, New York case, the correctional system's denial of a furlough to an inmate with AIDS was overruled.[100] Almost ten percent of state/federal and city/county correctional systems, and one-fourth of Canadian systems also report that HIV infection status may affect parole and other release decisions. Responses were fragmentary regarding the nature of such effects, but they could of course go either way—that is, toward earlier or later release.

Interaction of Testing and Housing Policies

Finally, correctional systems should give careful thought to how testing policies interact with housing policies. Any potential effect of mass screening on HIV transmission is certainly reduced if seropositives are not segregated. Even given the imperfect nature of the available tests, it is questionable from an infection control standpoint to mandatorily test without segregating. Yet, only one-third of the states that screen all incoming inmates also segregate all seropositives. One system reported that its mass screening program identified too many seropositives to segregate, so the system actually changed from a blanket segregation policy to case-by-case decisionmaking. The question again arises: why identify all seropositives if nothing special is to be done with the information, instead of attempting to prevent behavior that may place others at risk, regardless of the perpetrator's antibody status? The latter is the policy followed in Oregon.

8: Medical Care and Psycho-Social Services

The Presidential Commission on the HIV Epidemic recommends that medical and psycho-social services available to inmates with HIV infection and AIDS should be equivalent to the treatment and care available in the outside world. This should include access to all available therapeutic drugs, counseling and supportive services, and drug treatment programs.[101]

Medical Care for Inmates with AIDS

Medical care for AIDS patients has become a major budget item for some correctional systems. Experience in San Francisco and elsewhere has shown that costs of care can be substantially reduced by reducing the length of hospital stays. Indeed, the Institute of Medicine reports that the average lifetime cost of care per AIDS patient is now between $55,000 and $77,000, down from the 1986 estimate of $147,000. However, it is also true that costs tend to be higher for IV-drug use associated cases, because they tend to contract *Pneumocystis carinii* pneumonia which generally requires more frequent and longer hospitalization. Since most prison AIDS cases are associated with IV drug use, average costs may be higher for correctional cases.[102]

Medical care for AIDS patients in correctional facilities has come under severe criticism in some quarters. It has been alleged that medical staff are poorly trained and unresponsive to the needs of HIV-infected persons, that diagnostic procedures are faulty, and that facilities are poorly equipped, understaffed, and overcrowded. Critics of the New York system contend that, as a result of these and other problems, incarcerated AIDS patients have much shorter mean survival times after diagnosis than patients in the outside world.[103] As documented in previous editions of this report, there have been and continue to be numerous lawsuits filed regarding the quality of medical care for inmates with AIDS. Some of the most recent cases are discussed in Section 11 of this update. Correctional systems should emphasize early diagnosis and timely provision of available and appropriate therapies.

Availability of Therapeutic Drugs

Assessment of the level and quality of medical care is beyond the scope of this study. However, most correctional systems report making AZT therapy available to all inmates meeting the approved clinical criteria (82% of state/federal systems, 61% of responding city/county systems, and 25% of Canadian systems). Those systems that reported AZT was not currently available largely based their responses not on decisions to withhold the drug from qualified patients, but rather on the fact that they had no qualified patients. Presumably, these systems will provide AZT if and when they have prisoners who meet the clinical criteria. However, as noted below, there has been at least one lawsuit filed against a correctional system alleging that AZT was withheld.

Experimental drugs are not widely available in prisons and jails. For example, only 39 percent of state/federal systems administer aerosolized pentamidine to inmates with *Pneumocystis carinii* pneumonia. Only a handful of systems reported using any other experimental drugs or therapies for HIV infection or opportunistic diseases.

Many inmates have expressed the desire to participate in clinical trials of experimental drugs. However, this has been virtually impossible thus far because of the stringent federal regulations designed to protect prisoners from research abuse. There is now substantial sentiment for loosening these regulations to facilitate prisoner enrollment in clinical trials, with appropriate protections. The National Institute of Corrections recently funded a panel inquiry into this issue by the Division of Legal and Ethical Issues in Health Care at the Montefiore Medical Center/Albert Einstein College of Medicine in New York. The report of this panel recommends that prisoners have access to clinical trials of new and innovative therapies for HIV disease.[104]

Counseling and Supportive Services

Counseling and psycho-social supportive services are essential for all HIV-infected persons, whether in prison or in the outside world. Counseling should not be limited to pre- and post-HIV antibody testing. Rather, persons with HIV infection and AIDS require ongoing services. There is a particular need for counseling on death and dying and for family counseling. As in the context of antibody testing, counselors must pay particular attention to suicidality, since suicide rates are abnormally high among persons with HIV infection and AIDS. The Oregon correctional system offers ongoing individual and group counseling to infected inmates and to the "worried well."[105]

Drug Treatment Programs

Expanded drug treatment programs are essential to combatting HIV infection and AIDS. As noted earlier, most inmate cases of AIDS are associated with IV drug use. Therefore, drug treatment is an important part of prevention. The Presidential Commission on the HIV Epidemic specifically recommended that inmates who are identified as IV drug users or have been incarcerated for drug-related crimes be provided a minimum of 9-12 months of treatment (if consistent with sentence) based on the therapeutic community model.[106]

Pre-Release Planning

Finally, an important component of medical treatment and psycho-social service delivery is pre-release planning. This should include attention to medical and social needs, as well as education and prevention issues. One area of particular concern is that medication, such as AZT, be continued post-release. Special arrangements may be necessary to ensure continuity of medication. As noted in section 5, above, relatively few correctional systems provide AIDS education to inmates at the time of their release. Education at this critical juncture should be expanded so that releasees return to the community with AIDS prevention messages fresh in their minds.

9. Precautionary Measures

"Universal Precautions"

As noted earlier, the Centers for Disease Control have recently revised their guidelines for "universal precautions" in health-care settings. These guidelines are now recommended only with regard to exposure to blood (and other fluids containing visible blood), semen, vaginal secretions, tissues, and several other less commonly encountered body fluids. These precautions are no longer recommended for saliva, tears, sweat, vomitus, urine or feces, unless they contain visible blood.[107]

The new guidelines also recommend special precautions for dentistry because of the predictable contamination of saliva with blood, the likelihood of blood spattering, and the possibility of trauma to dental workers' hands during dental procedures. The guidelines also recommend use of protective barriers such as gloves, gowns, masks, and protective eyewear, depending on the type of procedures being undertaken. Sterile gloves are recommended for procedures involving contact with sterile body areas, examination gloves for other types of contact, and utility gloves for housekeeping chores. Sterile and examination gloves should be changed between patient contacts and should never be reused. Utility gloves may be decontaminated and reused unless deteriorated. Immediate and thorough handwashing is stressed by CDC, as is extreme care in handling needles and sharp instruments.[108] Many of these guidelines simply represent restatements of common-sense hygiene procedures. They were not developed specifically to prevent HIV infection, but their careful and consistent implementation become more important in light of the HIV epidemic.

These CDC guidelines represent reasonable and prudent steps for correctional staff to take to prevent their exposure to HIV on the job. In Oregon, precautionary measures are designed to "balance the level of risk involved with the need for staff to do their jobs safely and efficiently.... [T]he strategy must not establish precautions and responses to HIV infection which may create other safety hazards."[109]

The 1988 NIJ survey found that almost one-half of the responding correctional systems changed their policies regarding precautionary measures during the last year. The most common changes involved institution of universal precautions and wider availability of gloves and CPR masks with one-way airways. Many correctional systems are now issuing all of their officers a belt pouch containing latex gloves.

Increasingly, as well, correctional systems are making available spill kits to clean up body fluid spills. The Texas Department of Corrections has designed and distributed such a kit, along with extensive instructional material.[110] These kits typically contain disinfectant or household bleach solution, gloves, absorbent, and plastic bags for disposal of soiled items.

Correctional systems should ensure that regular and thorough training is provided to staff and inmates regarding appropriate precautionary measures against the transmission of HIV. In addition, systems should monitor the implementation of these measures to guard against carelessness. One system reported problems with recurrent "complacency and reduced concern for routine protection measures."

Availability of Condoms

Since the 1987 survey, one correctional system—Philadelphia's—instituted condom availability for inmates in the institutions. This brings to four the total number of correctional systems making condoms available to inmates. Several other systems issue condoms for conjugal visits and/or provide condoms to prisoners being released.

Survey responses again show that the main reason correctional systems resist making condoms available to inmates is the perception that such a policy would condone prohibited behavior. Oregon decided against the policy on the ground that it would send a "mixed message" regarding sexual activity in prison.[111] In Cook County (Chicago), jail medical staff wanted to institute a condom distribution policy for the gay unit in the jail, but the proposal was vetoed by correctional officers.

The primary argument in favor of condom availability is that sexual activity occurs in prisons and jails, whether or not it is prohibited, and the policy represents a reasonable response to help inmates protect themselves from a deadly virus. In support of his city's policy, Philadelphia Mayor W. Wilson Goode stated that "[t]he health emergency of AIDS within our prison system requires that this step be taken." The coordinator of the Philadelphia health department's AIDS Activities Coordinating Office said that the correctional system, through its condom policy, is by no means encouraging

inmates to engage in sexual activity. Rather, he noted, a major focus of the inmate training program on AIDS is the "message that to engage in sexual activity is to place your life at risk, condom or no condom."[112]

The Vermont system, which was the first in the nation to institute condom distribution, takes the position that correctional facilities should, as much as possible, offer "counseling opportunities and preventive practices similar to those available to the general public."[113] A principle of AIDS prevention is that information is not enough to foster behavior change – the means to facilitate such change should also be readily available. This principle is as applicable to correctional inmates as to anyone else.[114]

In Vermont and New York City, condoms are only available through medical staff and after counseling on risk reduction. Inmates found to be engaging in sexual activity are still disciplined. In Philadelphia, each incoming inmate receives three condoms as part of an AIDS information packet. Additional condoms are also available through institutional infirmaries. In Mississippi, condoms are available for sale in institutional canteens.

The availability of condoms to correctional inmates remains a complex issue. One writer has suggested that correctional systems may be vulnerable to lawsuits if they fail to provide condoms. The same writer suggests that inmates (and others) who lack rights to prevention mechanisms may be obligated to alter their lifestyles.[115] Correctional administrators must weigh these possibilities, as well as the other issues raised above, in deciding upon condom availability.

10: Confidentiality and Notification Issues

Need for Specific Disclosure Policies

The related issues of confidentiality and notification remain at the heart of correctional systems' response to HIV infection and AIDS. They also remain among the most difficult aspects of the correctional response. Confidentiality of any information is difficult to maintain in correctional facilities, let alone information of such great concern to so many other inmates and staff. Almost everyone thinks they "need to know" who is infected with HIV so they can take measures to protect themselves. In New York state, correctional officers almost universally desire to know inmates' antibody status.[116] In Oregon, correctional, probation, and parole staff attempted to use state occupational health and safety regulations to compel identification of prisoners with communicable diseases, including HIV infection. However, the regulatory agency, after receiving education about communicable disease transmission, determined that a more appropriate response was to fine the correctional department for failing to provide adequate training on precautionary measures and adequate equipment to implement the precautions. This forced the department to upgrade training and protective equipment to facilitate implementation of universal precautions.[117]

Indeed, universal precautions properly implemented make it unnecessary for anyone other than the inmate, his or her attending physician, and possibly the institutional superintendent to know an inmate's HIV antibody status or HIV-related diagnosis. Thus, correctional systems should place great emphasis on training regarding universal precautions, and the implementation and enforcement of such precautions.

Current Notification Policies

This year's survey reveals that many correctional systems still have notification policies based on "need to know." This is a vague concept that only seems to invite dispute and abuse. Such policies should be replaced with clear and specific statements. The Presidential Commission on the HIV Epidemic recommended that disclosure of inmates' antibody status should be "strictly limited" and that the policy should "specify clearly who is permitted to receive the information, what information is to be released, and under what circumstances.[118] Oregon policy, for example, clearly limits disclosure to the inmate, medical and dental staff, absent written consent.[119] In addition, some jurisdictions have laws requiring notification of public health authorities, victims of rape or other crimes of sexual abuse.

Systems should ensure that no unauthorized persons have access to information regarding inmates' HIV status. Methods of preventing unauthorized access include avoidance of keeping lists of HIV-infected inmates and elimination of obvious flagging of medical or other records.

Figures 20 and 21 summarize the responding systems' policies regarding disclosure of antibody status of inmates during their incarceration and at the time of their release. Inmates and medical staff are notified in the vast majority of all systems. Correctional central office and institution management are notified in a majority of state/federal systems, but only in a small number of city/county systems. In Canadian systems, institution management is generally notified, but not so commonly is central office notified.

Twenty-one states explicitly or implicitly require reporting of the names of HIV seropositives to public health departments. Twenty-eight state correctional systems reported such disclosure with regard to inmates. The Presidential Commission recommended disclosure of inmates' positive antibody test results to public health authorities so that they may carry out partner notification.[120]

Notably, less than one-fourth of state/federal systems and even smaller proportions of city/county and Canadian systems have policies permitting notification of correctional officers. Spouses and sexual partners are notified in relatively few state/federal and city/county systems, but in as many as one-fourth of Canadian systems. Even fewer systems in all categories reported notifying spouses/sexual partners of releasees. Indeed, very few systems reported disclosure of releasees' HIV antibody status to work or residential placements, either.

Even though the survey results suggest that little such notification is currently being done, there is clearly a great deal of concern over notification to spouses and sexual partners of releasees, as well as to parole authorities and/or community work and residential placements of persons leaving prison. The issue of sexual partner notification is particularly troublesome. Many correctional systems and officials feel that they have a moral

Figure 20

POLICIES REGARDING DISCLOSURE OF INMATES' HIV ANTIBODY TEST RESULTS DURING INCARCERATION, OCTOBER 1988

Who Receives Results	State/Federal Prison Systems (n=51)		City/County Jail Systems (n=28)		Canadian Systems (n=12)	
	n	%	n	%	n	%
• Inmate	50	98%	20	71%	9	75%
• Attending Physician	49	96	19	68	9	75
• Other Medical Staff	45	88	14	50	9	75
• Correctional Department Central Office	28	55	6	21	5	42
• Correctional Institution Management	30	59	5	18	8	67
• Correctional Officers	11	22	4	14	1	8
• Public Health Department	28	55	10	36	7	58
• Spouse	9	17	1	4	3	25
• Sexual Partners	8	16	0	0	2	17

Figure 21

POLICIES REGARDING DISCLOSURE OF INMATES' HIV ANTIBODY TEST RESULTS AT RELEASE, OCTOBER 1988

Who Receives Results	State/Federal Prison Systems (n=51)		City/County Jail Systems (n=28)		Canadian Systems (n=12)	
	n	%	n	%	n	%
• Residential Placement	7	14%	0	0%	1	8%
• Work Placement	0	0	0	0	0	0
• Public Health Department	15	29	2	7	4	33
• Spouse	6	12	0	0	2	17
• Sexual Partners	6	12	0	0	1	8

obligation to notify the sexual partners of releasees known to be HIV seropositive. Many systems also fear legal liability if they fail to notify sexual partners.

Applicability of the "Duty to Warn" Doctrine

The so-called *Tarasoff* or "duty to warn" doctrine has fueled the concern of many correctional officials, as well as clinicians. Tarasoff was a successful lawsuit brought against a psychiatrist whose patient committed a murder after allegedly discussing his intention during therapy sessions.[121] Actually, as commentators have pointed out, the *Tarasoff* decision proclaimed the clinician's "obligation to use reasonable care to protect the intended victim," which may or may not include the duty to warn the victim directly.

Tarasoff has not yet been litigated in relation to notification of sexual partners of HIV-infected persons. It is questionable whether it is applicable. First, for *Tarasoff* to apply, there must be a specifically identifiable victim, the clinician must know of some imminent danger to that person, and have some means to prevent harm from occurring. In addition, the health-care professional must weigh carefully the consequences of any breach of client confidentiality involved in disclosure. Many states have very strict confidentiality protections.[122] Indeed, in such jurisdictions, it may well be that a clinician could be sued whether or not he or she notified the sexual partner. As the Institute

of Medicine notes, when it comes to partner notification, "[t]he Scylla and Charybdis of conflicting professional obligations are not merely hypothetical."[123]

The American Medical Association and CDC have issued guidelines which emphasize counseling first, and notification of sexual partners only as a last resort if the individual refuses to notify himself or herself. The AMA recommends notification to public health authorities before any direct notification of sexual partners. CDC recommends that physicians or public health authorities carry out partner notification if the subject refuses to do so or "if it cannot be assured that partners will seek counseling." An effective strategy for reducing legal liability potentially associated with notification and failure to notify may be to vest in health-care professionals the *power but not the duty* to notify and limit this power to cases in which the threat of HIV transmission is clear and imminent.[124]

Correctional officials should carefully consider the applicability of these recommendations to incarcerated inmates and particularly to inmates being released into the community. Correctional systems should also carefully consider the question of whether notification policies applied to correctional inmates may justifiably differ from those applied to persons in the general public, simply because they are inmates and may, as a group, be perceived as less responsible than others. In general, anyone contemplating broader notification of sexual partners must consider the consequences of increased government involvement in decisions of the most intimate and private nature. Thus, notification policy should be designed to "protect third parties from serious harm, with minimal intrusion on the privacy" of the inmate. This is, admittedly, not an easy balancing act to perform but, if it can be done, it is likely to meet both ethical and legal tests.[125]

11: Legal and Labor Relations Developments

There continues to be a significant amount of legal activity surrounding AIDS in prisons and jails. While litigation increases, many of the key legal issues remain unresolved. However, in the past year, a number of major lawsuits have been filed on the issues of mandatory testing, segregation, confidentiality, and medical care for prisoners with AIDS. These cases should at least begin to clarify what has been a rather uncertain legal situation.

Issues Raised by Inmates

The major types of cases filed by inmates are challenges to segregation of and conditions of confinement for HIV-infected individuals, challenges to the quality of medical care provided to HIV-infected persons, challenges to mandatory testing programs, and allegations of breaches of confidentiality.

A major case filed in Alabama by the ACLU's National Prison Project involves all of these issues. *Harris v. Thigpen* challenges the Alabama state correctional system's mandatory HIV antibody screening program, seeks relief from the conditions of confinement in the segregated units where seropositive inmates are housed, asks improved medical and psycho-social services in the units, and claims that confidentiality of test results is impossible to maintain under the system's test and segregate policy. The testing policy is asserted to represent an unconstitutional search and seizure and a violation of inmates' right to privacy guaranteed under the Fourteenth Amendment. Moreover, it is asserted that because the tests are sometimes inaccurate, inmates are falsely labeled. Mandatory testing is also alleged to cause mental anguish for seropositive inmates (who are often incorrectly told that their positive test results mean that they have AIDS) and to lull seronegative inmates into a false sense of security. The suit also alleges that segregated HIV-positive inmates have extremely limited access to programs and activities (including work programs, which means that they are unable to earn "good time"), are required to submit to unnecessary and humiliating practices such as wearing surgical masks and disinfection of telephone receivers after use. In short, the segregated units are likened to "leper colonies." The quality of medical care is alleged to be inadequate (e.g., no AZT is available) and counseling services to be minimal at best. The claims for relief are based primarily on the Fourth (search and seizure), Eighth (cruel and unusual punishment, punishment disproportionate to crime), and Fourteenth (equal protection, due process, privacy, access to courts) Amendments, as well as to Sec. 504 of the Rehabilitation Act of 1973 (discrimination against handicapped persons).[126]

The state has disputed many of the factual allegations of the plaintiffs, and defends its testing policy on the ground that it is required by state law and that the tests do not result in significant numbers of false positives or negatives. Nor do defendants have a reasonable expectation of privacy. The segregation policy is defended on the ground that it was instituted in furtherance of a legitimate penal objective and that prisoners are not required to be housed in any particular facility or unit.[127]

The Connecticut case, *Smith v. Meachum*, challenges the permanent segregation of prisoners with AIDS, many of whom are medically capable of living in general population and participating in a full range of programs and activities for long periods of time. Yet, the plaintiffs charge, they are segregated without reference to their security classifications. These prisoners are allegedly confined to a separate prison hospital unit for 23-24 hours per day and are granted only limited access to recreation, religious activities, law library, and visits and no access to educational or work programs. The plaintiffs also claim that medical care in the unit is grossly inadequate, and that ventilation, heating, and food service are deficient. The bases of the suit are similar to those in *Harris v. Thigpen* – namely, cruel and unusual punishment, denial of equal protection, denial of access to the courts, and discrimination violative of the Rehabilitation Act of 1973. The case is pending. In an Eighth circuit case, *Muhammad v. Carlson*, the court held that a federal prisoner with AIDS could be confined in a restricted AIDS unit. The court rejected the argument that the prisoner had a liberty interest in avoiding established regulations regarding isolation of AID patients.[128]

In California, inmates in the "AIDS wing" at California Medical Facility, Vacaville (which actually houses asymptomatically infected inmates as well as those with all degrees of symptomatic HIV disease, including end-stage AIDS) have filed a class action suit challenging conditions of confinement in the unit and the allegedly "atrocious" medical and psychiatric care provided there. The low level of care is attributed to severe over-

crowding and understaffing. According to the plaintiffs, prisoners confined to the unit have extremely limited access to programs and activities. The state denies the allegations, claiming that the unit serves legitimate purposes – namely, protection of the inmates and more efficient provision of medical care – and that access to programs and activities is adequate.[129]

Several other cases have been filed by inmates with HIV infection or AIDS seeking release from segregation or relief from conditions of confinement associated with segregation.[130] In a North Carolina case, an HIV-positive inmate claimed to have been unconstitutionally segregated in a medium-security institution for engaging in sexual activity. The inmate had sought transfer to the central prison hospital, where inmates with AIDS are housed.[131] In a recently decided Pennsylvania case, segregation of inmates with AIDS was upheld.[132]

Several cases have addressed the question of whether HIV-infected inmates may be excluded from furloughs, conjugal visits, work-release programs, and certain vocational assignments. In a recent New York case cited earlier in this report, the court held that an inmate with AIDS could not be denied a furlough based on his medical condition. The court rejected the state's contention that the inmate required continuous medical monitoring which would not be available to him while on furlough and concluded that, in this case, the exclusion was not rationally related to a legitimate state purpose – that is, the protection of the inmate's health.[133]

On the other hand, in *Doe v. Coughlin*, another New York case, the correctional system's right to exclude an inmate with AIDS from conjugal visits was upheld by the state Appeals Court. However, the case has been accepted for review by the U.S. Supreme Court. In a Nevada case, the correctional system's exclusion of a seropositive inmate from certain work assignments was upheld and, in a pending case, a Texas inmate has challenged his exclusion from a pre-parole release program.[134]

A recent Indiana case, *Cameron v. Metcuz*, begins to address the critical question of whether correctional systems may be held liable for incidents in which HIV may have been transmitted through forced or involuntary acts. Cameron, the plaintiff inmate, was bitten by an HIV-positive prisoner who was known or "should have been known" by correctional officials to be predatory. Cameron did not claim to have become infected as a result of the bite, but sued correctional officials for failing to segregate this inmate, claiming that the failure to segregate constituted cruel and unusual punishment and a violation of due process rights. The court dismissed the claims without prejudice, meaning that the plaintiff may refile. The court declared that the case was on the "cutting edge" of the issue of the applicability of the prohibition against cruel and unusual punishment to inter-inmate violence and HIV transmission in correctional settings. However, the judge dismissed the claims on the ground that the plaintiff must allege and establish "deliberate indifference" or recklessness, rather than simply negligence, in order for a federal court to provide relief. The plaintiff filed an amended complaint on February 15, 1989.[135] This is a case of potentially great importance in shaping the correctional response to HIV infection and AIDS.

As noted above, a number of pending cases allege inadequate medical care for prisoners with AIDS. There are several cases unrelated to AIDS which set limits on the medical care required to be provided by correctional systems. In a First Circuit case, *United States v. DeColgero*, the court held that inmates must receive "adequate medical care" which meets local and national standards, but they "cannot insist that [their] institutional host provide [them] with the most sophisticated care that money can buy." In another case, the court held that correctional medical care need not "cater to the individual preference of each inmate." These standards are not altogether clear. For example, the difference between "adequate" care which meets professional standards and very "sophisticated" care will certainly not always be obvious. Several cases on the availability of AZT to prisoners with AIDS may help to resolve these issues.[136]

Misdiagnosis of HIV-related conditions may obviously present serious problems for prisoners as well as serious legal issues for correctional systems. For example, a New York inmate claimed that he had been wrongfully segregated for two years due to a mistaken AIDS diagnosis. However, the court held that, based on the available facts, the diagnosis did not represent gross negligence because of the relative paucity of information about AIDS available when it was made (1982). The key issue "potentially" before the court was "the degree of care that prison officials must exercise in confirming a medical diagnosis of AIDS before segregating an inmate. However, insufficient information regarding the decision process was available for the court to make a finding on this issue.[137]

Several other recent inmate cases challenged various HIV antibody testing policies. A Texas case challenging that state's policy of mandatory testing for identified members of "high-risk groups" was dismissed.[138] In Oklahoma, an inmate failed in an attempt to be exempted from the state's mandatory testing policy on the ground that submitting to a blood test violated his re-

ligious beliefs, while another Oklahoma case alleging unconstitutional coercion to submit to an HIV antibody test remains pending.[139]

In a New York decision, the court granted plaintiff's motion for a preliminary injunction against the Department of Correctional Services' placement of HIV-seropositive inmates in a segregated dormitory. The state claimed that the placement was intended to facilitate improved and more efficient medical care. However, the court declared that the policy labeled the inmates, thus depriving them of their constitutional right to privacy. The right to privacy, in this case, comprised two legitimate interests: to avoid disclosure of personal matters and to be able to make important decisions independently -- e.g., to decide who to inform regarding one's HIV status. According to the court, both of these interests were violated by the state's policy. Instead, the court declared, placement in the dormitory should be voluntary.[140]

Another important case on the confidentiality of AIDS-related information in prison has arisen in Connecticut. In *Doe v. Meachum*, the plaintiffs seek an end to the correctional department's practices of maintaining and widely circulating lists of HIV-infected inmates (e.g., to all institutions and to "all staff members who may come into contact with [them] during the course of their duties") and of conspicuously marking with a red circle or dot all papers accompanying HIV-infected inmates when they are transported outside the institution. The suit contends that the department has no procedures for limiting the dissemination of the list of infected individuals. Indeed, the list has allegedly been made available to inmates. According to the plaintiffs, the "red dot" policy has led to humiliating and discriminatory actions against them by department staff and other law enforcement personnel. The suit is based on rights of privacy guaranteed under the First, Fourth, Ninth, and Fourteenth Amendments and freedom from discrimination against handicapped persons provided for in the federal Rehabilitation Act of 1973.[141]

In a Wisconsin case, the correctional system was held not to have breached an inmate's confidentiality. Medical staff had been discussing the inmate's medical condition with correctional officers outside the inmate's infirmary room door. The state countered that the inmate himself had publicized his own HIV-related illness within the correctional system and that the officers and medical staff were simply discussing visiting procedures for the inmate.[142] A Texas confidentiality case involved certain correctional staff revealing an inmate's HIV positive status to other correctional staff. The inmate was transferred to another facility and the case was settled out of court.[143]

Issues Raised by Inmates and Staff

Major objectives pursued by inmates and correctional staff in lawsuits and administrative actions include mandatory testing and segregation, access to identities of HIV-infected inmates, aggressive response to possible transmission incidents, and protection against exposure to HIV.

In a number of pending cases, inmates are seeking mandatory HIV antibody screening of inmates (and, in one case, of all officers as well) and segregation (or dismissal, for officers) of seropositives.[144] Several other cases of this sort brought by inmates have been dismissed or otherwise disposed in favor of the correctional departments' policies. For example, an Eighth Circuit case, *Glick v. Henderson*, upheld the Arkansas state correctional system's decision not to institute mandatory screening or segregate seropositives. The court held that the plaintiff's suit was based on "unsubstantiated fears and ignorance" such as the possibility of transmission through sweat and mosquito bites. However, a concurring opinion noted that the plaintiff might have a stronger case if he emphasized the danger of sexual assault by unsegregated HIV-positive inmates. The case was dismissed without prejudice, so it may be refiled.[145] Two pending cases involve correctional officers unions seeking mandatory testing and/or segregation of seropositives.[146]

In Nevada and Oregon, correctional staff have taken collective action to compel disclosure of the names of HIV-positive inmates. In Nevada, this effort was supported by the correctional department and the state health department and was able to win significant changes in the state attorney general's opinion that the information could only be disclosed to medical staff. The revised regulations permit disclosure of the names to correctional officers who have direct physical contact with seropositives.[147] In Oregon, as discussed earlier, officers sought disclosure of the names of seropositive inmates. Instead, the cognizant administrative body fined the correctional department for having inadequate education and protective equipment, and ordered that the situation be rectified.[148]

Several cases have arisen regarding correctional systems' responses to particular incidents in which HIV transmission was allegedly possible. A Louisiana case involved several inmates who contended that another inmate thought to be HIV-seropositive threw feces and urine on them. The plaintiffs complained that they had not been offered testing. The case was dismissed on the

basis of medical affidavits stating that the possibility of HIV transmission in the incident was too remote to justify testing the inmates.[149] In Maryland, a correctional officer has filed suit seeking to compel the testing of a prisoner to whose blood he claimed to have been exposed.[150] Finally, in Minnesota, an HIV-infected inmate who bit two prison guards was convicted of assault with a deadly weapon.[151]

In more generally framed cases, North Carolina correctional staff filed a union grievance alleging that they were exposed to HIV on the job and a group of Wisconsin inmates alleged cruel and unusual punishment on the ground that they were exposed to HIV by being housed in the same institution as prisoners positive for the virus. The latter case was decided in favor of the department on the ground that "there is only minimal risk of harm to the plaintiffs and the defendants have taken steps to reduce that risk even more," principally through AIDS education and single-celling of infected inmates. The court declared that "the constitutional standard does not require prison officials to insure against the contracting of an infectious disease." Finally, the decision upheld the department's policy of maintaining the confidentiality of inmates' HIV antibody status. The court determined that, in formulating this policy, "[t]he defendants have considered both the minimal risk of AIDS exposure to the majority of . . . inmates and the constitutional rights of the [infected inmates]. This practice is within the discretion of these prison officials."[152]

The "assumption of risk" doctrine is likely to prevent correctional systems from being held liable for HIV infections resulting from consensual acts of inmates. This doctrine states that persons voluntarily placing themselves at risk are responsible for their own protection.[153] Although no such cases have as yet arisen, it still appears that correctional systems will be most in danger of liability for HIV infections of inmates in cases involving rape or other forced activity. Finally, the possible application of the *Tarasoff* doctrine to the question of correctional officials' duty to warn sexual partners of HIV-infected inmates has already been discussed. It is highly questionable that this liability doctrine translates directly or compellingly into any third party's duty to warn sexual partners of HIV-infected persons.

12: Legislative Developments

The areas of most frequent AIDS-related legislative activity in the past year have been anti-discrimination and confidentiality, and testing and notification. That these trends seem somewhat in conflict reveals the continuing broad disagreement about the appropriate legislative response to the HIV epidemic. The Institute of Medicine declared that public health measures against the HIV epidemic are most effective if accompanied by strong protections against discrimination. The Presidential Commission made its highest-priority recommendation the enactment and enforcement of strong anti-discrimination laws, "within the context of HIV [infection] as a handicap" subject to the provisions of the Rehabilitation Act of 1973.[154] The federal government has yet to take legislative action in this area, although, notably, the Justice Department reversed its earlier legal justification of discrimination against persons with AIDS based on fear of contagion. The Department's current position is that the federal Rehabilitation Act's handicap discrimination provisions cover all HIV-infected individuals, whether or not they are symptomatic, and that discrimination against such persons on the basis of fear of contagion is unjustifiable. Many states and municipalities have and continue to enact strong anti-discrimination and confidentiality laws.[155]

At the same time, there has been significant legislative activity in the area of testing and notification. This year, there appears to have been less legislative activity, at least in terms of laws passed, in the area of *mass* mandatory screening of prisoners. Michigan and Wyoming recently enacted such laws, and mass screening bills are pending in several others, including Utah.[156] The major upsurge in activity has been in *selective* testing and notification.

In November 1988, California voters defeated Proposition 102 which would have mandated reporting by name of all HIV-seropositive individuals to local health departments. (About twelve other states currently have such laws in force.) At the same time, California passed Proposition 96 which, among other things, allows court ordered testing of individuals involved in possible transmission incidents with law enforcement or emergency response personnel. Recent legislation in several states (including Florida, Illinois, and Oregon) requires HIV antibody testing of persons convicted of sex crimes, prostitution, and/or drug offenses. A Texas law permits testing of individuals indicted for sexual assault at the discretion of the court, while a recently passed California law requires testing of persons charged with sexual crimes and assaults on law enforcement officers.[157]

Notification provisions sometimes occur within the context of a broadly protective confidentiality law, and sometimes in independent measures. For example, a recent New York state law requiring counseling and informed consent in all testing and strictly limiting disclosure of results also allows physicians to disclose test results to sexual partners and needle-sharing partners of seropositives. The law also grants physicians immunity both for informing, and failing to inform, contacts of HIV-positive persons.[158] Numerous states passed laws expanding notification of HIV antibody status to persons possibly exposed, including law enforcement and emergency response staff. Such notification laws may come into conflict with state prohibitions against testing without informed consent. In other words, notification could only occur if the individual agreed to be tested. This is the tacit assumption in a recent Massachusetts law which provides for the notification of corrections, law enforcement, and medical personnel who may have been exposed to an infectious disease in the line of duty. However, the law does not mandate testing of anyone and declares that "the identity of the patient is not to be revealed."[159] Thus, the officer or medical staff member is simply told that he or she may have been exposed, but is not told the name of the infected person.

Conclusion

HIV infection and AIDS continue to pose significant problems for correctional systems. Addressing these problems effectively requires knowledge, sensitivity, coordination, and the ability to substitute rational decision making for misjudgment based on fear. Correctional administrators and staff have been engaged in this effort since early in the AIDS epidemic. Many of them have developed imaginative and innovative approaches embodying a rational and compassionate response. However, there is still a great deal of public and political pressure on corrections to adopt extreme policies.

This update edition of *AIDS in Correctional Facilities* has presented the results of the fourth NIJ survey of correctional facilities as well as current information from biomedical and epidemiologic research. The following are the major findings and recommendations:

Biomedical Research. There has been considerable progress in understanding the structure and replication of HIV, but the interaction of HIV with the human host is less well understood. Prospects for an effective vaccine are no more favorable now than they were two years ago. However, some progress has been made regarding therapeutic drugs to prolong the lives of AIDS patients.

Epidemiology of HIV Infection and AIDS in Correctional Facilities. Cumulative total AIDS cases among correctional inmates now number over 3,000. However, the distribution of cases across systems and regions is still quite uneven. HIV seroprevalence rates in correctional populations remain quite low, except in the Northeast. Fragmentary data continue to show low rates of HIV transmission in prisons and jails. There have been no documented job-related cases of HIV infection or AIDS among correctional staff.

Tuberculosis and HIV. Sharply increasing incidence of tuberculosis within and outside correctional facilities has been reported in the past few years. This increase has been clearly linked to HIV infection. Tuberculosis presents serious problems for corrections because of the contagious nature of the disease. Therefore, vigorous measures of prevention and control are needed.

Education and Training. Most correctional systems, especially at the state and federal levels, provide live AIDS training for inmates and staff. However, there continues to be significant lack of uniformity in training programs within and across systems. All institutions should provide mandatory live training. Training for inmates at release should also be undertaken, so that individuals re-enter the outside world with AIDS prevention messages fresh in their minds.

Testing and Screening. The debate on mass mandatory screening in correctional facilities continues. However, the trend to mass screening seems to have slowed and there appears to be more emphasis on voluntary and on-request testing, as well as on blind seroprevalence studies.

Housing and Correctional Management. The past year saw the solidification of the trend to case-by-case decisionmaking regarding housing and programming for inmates with HIV infection and AIDS. Proponents of case-by-case decisionmaking state that this approach appropriately focuses on individual needs and characteristics rather than solely on medical categories, and results in the least restrictive housing assignments possible for these inmates. A major reason given for minimizing the use of segregation is that it is extremely difficult to offer segregated inmates a full range of programs and activities. Persons with HIV infection and AIDS do best medically and psychologically when they can lead as normal lives as possible.

Medical and Psycho-social Services. Medical and psycho-social services for prisoners with HIV infection and AIDS should be as closely equivalent as possible to those available in the community. This includes access to experimental therapies, pre- and post-test and ongoing counseling, and drug treatment programs. Pre-release planning should link individuals with all necessary and available services in the community.

Precautionary Measures. CDC has revised its "universal precautions" guidelines to emphasize blood, semen, and vaginal secretions and de-emphasize saliva, tears, urine, feces, sweat, vomitus, and nasal secretions, unless these fluids contain visible blood. More correctional systems are adopting universal precautions and making gloves and CPR masks readily available to staff. Only one new correctional system this year moved to make condoms available to inmates while in the institution.

Confidentiality and Notification. Very specific disclosure policies are preferable to vague "need to know" formulations, but many systems still rely on the latter. Systems should avoid keeping lists of HIV-infected prisoners and flagging inmates' medical or other records in

any obvious fashion because of potential violations of inmates' privacy rights. Very few correctional systems officially notify correctional officers of the names of HIV-infected inmates. Similarly, very few systems notify the sexual partners of infected inmates. It appears that the legal "duty to warn" doctrine may not be applicable to notifying sexual partners of HIV-infected persons. In general, notification policies should aim to protect third parties with minimal intrusion on inmates' privacy.

Legal Issues. A number of recently filed cases address the major correctional AIDS issues: mandatory testing, segregation, medical care, and confidentiality. These cases may help to resolve some of the existing legal uncertainties.

Legislative Developments. There has been less legislative activity in the past year regarding mandatory mass screening of prisoners and more activity in the area of selective testing and notification—e.g., with regard to certain categories of inmates such as sex offenders or in response to possible transmission incidents.

The National Institute of Justice hopes that its series of reports on AIDS in Correctional Facilities has helped correctional officials and policymakers to meet the challenge of AIDS. NIJ will continue to provide up-to-date information on the HIV epidemic to the criminal justice system.

NOTES

1. H. Fineberg, "The Social Dimensions of AIDS," *Scientific American*, October 1988; 259: 128.
2. Jurisdictions responding last year that did not respond this year were Orange (California), Ventura (California), Westchester (New York), Wayne (Detroit, Michigan), Harris (Houston, Texas), and Baltimore City (Maryland). Jurisdictions that failed to respond both in 1987 and 1988 were Cuyahoga (Cleveland, Ohio), Shelby (Memphis, Tennessee), and Orleans (New Orleans, Louisiana). Dallas County, Texas did not respond in 1987 but responded in 1988.
3. Institute of Medicine, National Academy of Sciences, *Confronting AIDS: Update 1988* (Washington, 1988).
4. *Ibid.*, 123, 135.
5. R. Gallo and L. Montagnier, "AIDS in 1988," *Scientific American*, October 1988; 259: 45.
6. R. Redfield and D. Burke, "HIV Infection: The Clinical Picture," *Scientific American*, October 1988; 259: 93.
7. M. Essex and P. Kanki, "The Origins of the AIDS Virus," *Scientific American*, October 1988; 259: 70-71.
8. *Ibid.*, 67-68.
9. Institute of Medicine, *Update 1988*, 124. Hereafter, in this report, all references to HIV should be understood to mean HIV-1.
10. *Report of the Presidential Commission on the HIV Epidemic* (Washington, June 1988), p. XVII.
11. Institute of Medicine, *Update 1988*, p. 37.
12. R. Redfield, D. Wright, and E. Tramont, "The Walter Reed Staging Classification for HTLV-III/LAV Infection" (Special Report) *New England Journal of Medicine* 1986; 314: 131-132; Redfield and Burke, "The Clinical Picture," p. 90-94. This article contains excellent charts depicting the stages of HIV infection.
13. K.B. MacDonnell et al., "Prognostic Usefulness of the Walter Reed Staging Classification for HIV Infection," *Journal of Acquired Immune Deficiency Syndromes*, 1988; 1: 367-374.
14. W. Haseltine and F. Wong-Staal, "The Molecular Biology of the AIDS Virus," *Scientific American*, October 1988; 259: 55; Institute of Medicine, *Update 1988*, p. 135.
15. H.W. Jaffe (CDC), personal communication, February 1989.
16. J.W. Curran et al., "Epidemiology of HIV Infection and AIDS in the United States," *Science*, February 5 1988; 239: 615.
17. Gallo and Montagnier, "AIDS in 1988," p. 45.
18. R.W. Price et al., "The Brain in AIDS: Central Nervous System HIV-1 Infection and AIDS Dementia Complex," *Science*, February 5, 1988; 239: 588.
19. J. Foreman, "5-Minute AIDS Test Wins U.S. Approval," *Boston Globe*, December 14, 1988.
20. Institute of Medicine, *Update 1988*, pp. 79-80.
21. CDC, "Update: Serologic Testing for Antibody to HIV," *Morbidity and Mortality Weekly Report (MMWR)*, January 8, 1988; 36: 833-840, 852; D.S. Burke et al., "Measurement of the False Positive Rate in a Screening Program for HIV Infections," *New England Journal of Medicine*, October 13, 1988; 319: 961-964.
22. G. Schochetman, C. Ou, and W. Jones, "Polymerase Chain Reaction," *Journal of Infectious Diseases*, December 1988; 158: 1154-1157.
23. Institute of Medicine, *Update 1988*," pp. 20, 141-145; T.J. Matthews and D.P. Bolognesi, "AIDS Vaccines," *Scientific American*, October 1988; 259: 120-126. This article includes a chart summarizing the vaccines under development and testing.
24. Institute of Medicine, *Update 1988*, p. 143; Matthews and Bolognesi, "AIDS Vaccines," pp. 120-126; Redfield and Burke, "The Clinical Picture," p. 93.
25. Matthews and Bolognesi, "AIDS Vaccine," pp. 120, 126; Institute of Medicine, *Update 1988*, p. 145.
26. For an overview of research on therapeutic drugs, see R. Yarchoan et al., "AIDS Therapies," *Scientific American*, October 1988; 259: 110-119, especially the charts on pp. 112 and 118.
27. Institute of Medicine, *Update 1988*, pp. 130-131; M.A. Fischl et al., "The Efficacy of AZT in the Treatment of Patients with AIDS and AIDS-Related Complex: A Double-Blind, Placebo-Controlled Trial," *New England Journal of Medicine*, 1987; 317: 185-191.
28. *New York Times*, December 18, 1988.
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